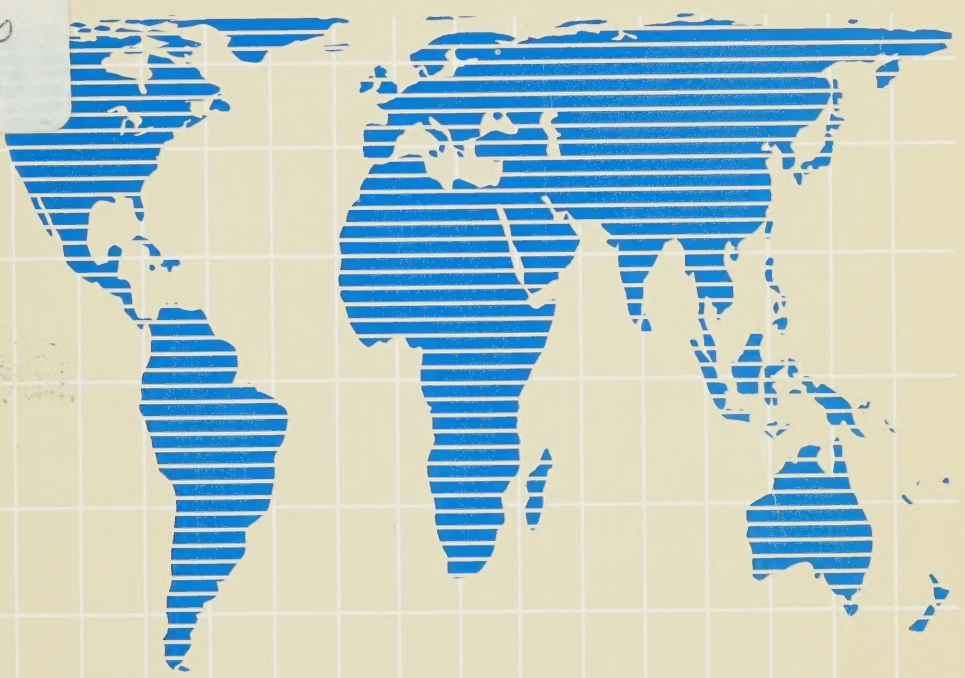


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DRC ANNUAL REPORT 1987 / 1988

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The map on the front cover is based on the Peters' Projection rather than the more familiar Mercator Projection.

The Peters' Projection introduces several innovative characteristics: an accurate rendition of the proportion of the land surface area; graphical representation of the entire world surface, including the polar regions; and the Equator placed at the centre of the map. The distortions that do appear are distributed at the Equator and at the Poles; the more densely settled earth zones, it is claimed, appear in proper proportion to each other.

The map is printed courtesy of Dr Arno Peters of the University of Bremen.



INTERNATIONAL DEVELOPMENT RESEARCH CENTRE

CENTRE DE RECHERCHES POUR LE DEVELOPPEMENT INTERNATIONAL

Chairman of the Board
Président du Conseil

July 15, 1988

The Rt. Hon. Joe Clark, P.C., M.P.
Secretary of State for External Affairs
Lester B. Pearson Building
Ottawa, Ontario

Dear Minister:

In accordance with Section 22 of the International Development Research Centre Act, I have the honour to transmit herewith the Annual Report of the International Development Research Centre for the fiscal year ending March 31, 1988 which includes the financial statements of the Centre and the Auditor General's report thereon.

Yours sincerely,

Janet M. Wardlaw

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Please direct requests for information about IDRC and its activities to the IDRC office in your region.

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Annual Report 1987-1988

International Development Research Centre

The International Development Research Centre (IDRC) is a public corporation created by the Parliament of Canada in 1970 to stimulate and support scientific and technical research by developing countries for their own benefit.

The fields of investigation to which IDRC gives its financial and professional support include: farming; food storage, processing, and distribution; forestry; fisheries; animal sciences; energy; tropical diseases; water supplies; health services; education; population studies; economics; communications; urban policies; science and technology policy; earth and engineering sciences; and information sciences.

Although IDRC is funded by the Canadian Parliament, its operations are guided by an international 21-member Board of Governors. Under the IDRC Act, the chairman, vice-chairman, and nine other governors must be Canadian citizens; in practice, 7 of the remaining 10 governors are from developing countries.

The programs that the Centre supports help developing countries build the scientific competence of their institutions and the researchers so that these countries can work to solve their own problems. Research projects supported by the Centre are, therefore, identified, designed, conducted, and managed by developing country researchers in their own countries, to meet their own priorities.

IDRC helps to create and supports international networks through which developing countries can learn from each other, share common experiences, and conduct similarly designed studies in areas of mutual concern. The Centre also promotes cooperation between researchers in developing countries and their counterparts in Canada.

IDRC has its headquarters in Ottawa, with regional offices in

- Bogotá, Colombia (Latin America and the Caribbean);
- Cairo, Egypt (Middle East and North Africa);
- New Delhi, India (South Asia);
- Nairobi, Kenya (Eastern and Southern Africa);
- Dakar, Sénégal (West and Central Africa); and
- Singapore (Southeast Asia, East Asia, and the Pacific).

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Introduction

At the beginning of this year, the Government of Canada announced its aid strategy for developing countries. The highlights of this strategy include the government's commitment to review all its aid activities in light of how they contribute to increasing the ability of the recipient countries to solve their own problems. In practice, this means that the development of local skills is now the priority of Canada's official development assistance.

The International Development Research Centre (IDRC) strongly approves of this policy of the Canadian government and fully supports it. All of IDRC's activities may be summed up as constituting a bold investment in one of the most valuable components of Third World human resources — that is, the men and women who seek original and practical solutions to development problems in partnership with the most disadvantaged peoples. In the 18 years that have passed since it was created by the Parliament of Canada, IDRC has helped to train thousands of technicians and scientists. Some have been appointed to important decision-making positions; others are playing their part, day after day, in the work of hundreds of research institutions, and a great number have been decorated for the contribution they have made to improving the lot of their fellow citizens.

The most telling proof of the importance attached by IDRC to the development of human capital is the fact that it is itself prepared to be a place for experience and training, which leaves plenty of room for residents of the Third World to serve at all levels of the organization. In this way, IDRC's daily operations become an opportunity for many people from Third World countries to advance their skill and knowledge through exchanges with and advice from their colleagues.

At the highest level, there are seven representatives of Africa, Asia, the Caribbean, and Latin America on IDRC's Board of Governors. Its six regional offices in Bogotá, Cairo, Dakar, Nairobi, New Delhi, and Singapore, which form the spearhead of its drive to decentralize, are all managed by individuals from the particular region. In addition, at the various executive levels in Ottawa and in the regional offices, there are dozens of experts, scientists, and specialists from developing countries. Many of them return, after several years of service with IDRC, to take up important leadership positions in their own countries.

These IDRC staff members interact constantly with the hundreds of researchers who are looking for lasting solutions to the problems of development. They are encouraging the best minds in the developing regions to push forward and extend the supposed frontiers of knowledge and innovation, which too many people in industrialized countries consider unalterable. They constantly nourish the intellectual, creative, and innovative ferment that develops along with one of the most valuable human qualities: the conviction that it is possible to set things on a new course and shape the

future. The thousands of partners of IDRC, with a new sense of purpose created by their ability to change the world, have an increasingly firm belief in their own worth. There is, in fact, no stage on the way to the full and proper use of human resources that is more critically important than the individual's arrival at a consciousness of personal worth. The most critical moment in the development of a human being or a community has certainly arrived when self-awareness becomes a reality. IDRC, because it leaves the initiative to the Third World researchers, is a powerful instrument for developing this self-confidence.

By giving the leading minds of the Third World the opportunity to meet the challenges of scientific and technical creation, IDRC is opening up a limitless horizon to the development of human resources. Moreover, this "brains trust" is not confined within an ivory tower. The scientists supported by the Centre are in close contact with the people who are experiencing the problems under study. This greatly enhances the possibility of finding realistic and workable solutions. From time to time, the research work even affords real opportunities to transfer scientific methodology to fishermen, families, and farmers. For example, village women help to design, implement, and analyze inquiries into the health needs of their communities; peasants join with breeders in producing improved strains; and residents of shanty towns work along with sociologists and planners who are searching for new ways of improving their quality of life. More and more of the research projects are providing opportunities to share scientific methodology with peoples who are, in some cases, illiterate — solid evidence that human resource development knows no limits.

The appropriateness of a strategy based on the full development of human resources is amply demonstrated by the results achieved. At first glance, there is not much difference between a turnkey operation and one that is built using locally developed technology; between seed that has been imported and seed that has been produced on site; between a given piece of equipment and another that was made by workers in the community. However, time will doubtless reveal the difference. Technology that has no local roots rusts, breaks, and comes to a stop for lack of proper maintenance and spare parts; in contrast, technology that has been invented and produced locally not only endures, but also can change, evolve, and develop. Several IDRC projects — in the areas of telecommunications, computerization, improvement of strains, economic innovation, food processing, wastewater treatment, and water supply — have created centres of excellence. In the context of these projects, Third World experts, who are world authorities in their fields, provide training for colleagues from other developing countries. There is no better proof of the value of an investment in raising the level of human ability.

The needs are nevertheless immense: less than 3% of all research and development funds are spent in developing countries. These countries have only 95 engineers and scientists per 10 000 inhabitants, as compared with an average of 285 for the countries with market economies. A society has no future if it cannot rely on a steady stream of new knowledge provided by its own researchers.

This need for local scientific and technical skills has gained further importance since the World Commission on Environment and

Development — the Brundtland Commission — demonstrated how important it is to develop viable long-term agriculture that is more ecologically based and less dependent on chemical products. This type of agriculture requires a steady flow of new strains that are appropriately adapted to local conditions. The switch from chemical to biological pest control depends on the ability, at the local level, to identify “good insects” and to increase their numbers, because viruses, bacteria, and harmful insects are constantly evolving. In fact, agriculture that shows greater respect for the environment and has a more strongly biological orientation cannot exist without continuing input from specialists in the local environment; this kind of agriculture cannot be imported.

The need for local skills is obvious with regard to viable agriculture that respects the environment; it applies just as much to the health and well-being of local populations. The bacteria and viruses that affect human beings differ from one place to the next and their evolution is determined by the conditions of their local microenvironment. The same goes for the analysis of the economy; even though world economies are increasingly interrelated, the inhabitants of East Africa, Southeast Asia, and Latin America need to know their own socioeconomic context and to invent strategies and policies tailored to their needs.

Improvement in scientific and technical skills also creates better conditions for the development of national human resources. The quality of training is greatly enhanced by the contributions of highly qualified researchers, beginning with teaching in universities and in specialized institutes.

Finally, IDRC places great emphasis on South-South cooperation in scientific and technical training. IDRC gives researchers an opportunity to learn on the job, increases exchanges, encourages the growth of centres of excellence, assists researchers who engage in teaching to keep their knowledge up to date, and awards a large number of training fellowships in the institutions of developing countries; these actions have numerous multiplier effects, all of which contribute to the most promising human resource development.

All the work devoted to the development of individuals is carried out in a context of research related to everyday problems. In this way, the individuals supported by the Centre raise their level of competence and, at the same time, make a solid contribution to improving the living conditions of their fellow citizens.

During the past financial year, IDRC has placed particular emphasis on the coordination of its programs, so that the people it is helping to train will have both a sound training in a specific scientific discipline and the ability to work with colleagues in other disciplines. For example, several groups of specialists in agricultural and aquacultural research have been trained in economics and in promoting the results of research. In this way, those individuals funded by IDRC increase their competence without losing sight of their basic objective: to improve the conditions of the world's poorest inhabitants.

Divisional summaries

Agriculture, Food and Nutrition Sciences 107 projects, \$26.5 million

The goal of the Agriculture, Food and Nutrition Sciences (AFNS) Division is to increase access to food for the individual. Achieving this goal involves strategies that go beyond increasing food production. Equitable distribution of the benefits of agricultural production and the purchasing capacity of the rural and urban poor must be ensured. The need to increase opportunities for income-generation and employment within the production and utilization system for renewable natural resources is thus of increasing concern. Concerns for qualitative aspects of food has also led to increased programing in nutrition.

Promoting the development of sustainable land-use systems has become both a program objective in itself as well as an underlying factor to be considered in all program activities of the Division. These broad themes are reflected in the specific examples of activities of the Division's five programs that follow.

AFNS is developing stronger links with other divisions and collaborates in their new initiatives. For example, since the Women in Development Unit was created in the Social Sciences Division, AFNS has contributed funds to the Unit and included gender-related considerations in its programs.

Crop and animal production systems

The development of stable and sustainable crop- and animal-production systems underlines many of the projects supported by the crop and animal production systems program. For example, special attention was given in 1987-1988 to agroforestry: the integration of woody perennial species into agricultural systems. Such systems not only provide fuel, timber, fodder, food, and other products, but the trees and shrubs can also play a major role in recycling nutrients and in stabilizing and protecting soils from erosion.

The program joined the forestry program in supporting three new agroforestry projects in 1987-1988: the collection of the leguminous tree, *Sesbania* species, in Tanzania; the biological control of psyllids, a devastating pest of *Leucaena*, in Asia; and the development of alley farming systems in Mali — alley farming is an agroforestry system in which crops are grown between hedgerows of trees or shrubs, with the prunings from the hedges being either fed to livestock or used as a mulch. In addition, support was given to second phases of two projects originally funded by the forestry program alone: one in Peru and one in Kenya. In the project in Kenya, the new phase will ensure widespread testing and dissemination of some of the new technologies developed in phase one, particularly for live fencing using

species of *Caesalpinia*, *Parkinsonia*, and *Zizyphus*, and for improving grazing land using *Acacia*, *Leucaena*, and *Prosopis* species.

Another new initiative during the year was the support of an innovative research project on soil erosion in Nepal. This cooperative project involves the Integrated Soil Survey Section of the Nepalese Government and the University of British Columbia, Vancouver. The project seeks to study the extent, causes, and consequences of soil erosion under various land-management practices in the mid-hills of Nepal, with the aim of identifying sustainable land-use systems. The theme of sustainable land-use systems was also pursued in three related projects on agropastoralism in the Maghreb countries of Algeria, Morocco, and Tunisia.

In late 1986, IDRC and the Small Ruminant Collaborative Research Support Program of the U.S. Agency for International Development (USAID) jointly sponsored a workshop on production systems for small ruminants in South and Southeast Asia. Participants at the meeting stressed the large potential contribution that tree cropping systems could make to providing feed for sheep and goats. About 20 million ha of land are under permanent tree crops in the region. As a result of this meeting, proposals have been prepared for several related projects that look at integrating small ruminants with perennial crops. The first project on this theme was funded in 1987-1988 and seeks ways to use, more effectively, the land and natural vegetation under coconuts for increased meat production, especially from goats.

Research on small ruminants continues to receive a high priority because of their importance in smallholder systems, in harsh environments, and in areas of Africa that are unsuitable for cattle production because of tse-tse fly-transmitted trypanosomiasis. A project in Zimbabwe, aimed at improving goat and sheep production through improved management and breeding, was renewed for a second phase. Goats are also the main focus of a new project in Nepal.

A group of projects on rice-fish systems started in 1986-1987 with a project in northeastern Thailand. In 1987-1988, a second research project, also looking at integrating fish within rice-based systems, was started in Indonesia. Raising fish in rice paddies has been shown to have beneficial consequences for rice yields and, at the same time, the production of fish contributes to improved diets and to increased incomes. A further project was started during the year on the management of muscovy ducks for meat in Thailand.

A new area of research that was initiated during 1987-1988 addresses the issue of draft animal power. It has been estimated that about half the land area in developing countries is cultivated using animal power and, in parts of Asia, the fraction is much higher. Research on animal power, especially on buffalo, has been generally neglected and little is known about power and labour constraints on small farms, the potential contribution of draft animals, and the extent to which farmers are willing to allocate scarce resources of time or money to alleviate these constraints. In an attempt to address these issues, three parallel projects were supported in India, the Philippines, and Thailand.

In the crops area, a new initiative was supported on testing triticale on small farms in Syria. Although IDRC supported several projects on triticale

in the 1970s, little support has been provided recently. Triticale, an artificial crop developed from crosses between wheat and rye, performs well in rainfed regions that are too dry for bread wheat. It has a good protein content and out-yields barley at the wetter end of the barley-growing rainfall spectrum.

The Oilcrops Network for Eastern Africa and South Asia continued to expand during 1987-1988. The core network project was renewed, with continued support for the network advisor based in Ethiopia. In addition, the national projects in Sri Lanka and Ethiopia were renewed for second and third phases, respectively. The project in Sri Lanka has made good progress in developing improved sesame and groundnut lines. These are now being tested in adaptation trials on farmers' fields in several districts in the dry zone of the country. In Ethiopia, high-yielding new cultivars of rapeseed, sesame, and groundnuts have been released, and on-farm trials have indicated that, through a combination of improved varieties and agronomic practices, yields may be substantially increased for several oilseed crops including nigerseed, linseed, rapeseed, mustard, and sunflower. New initiatives were also started during the year in Tamil Nadu, India, and in the Philippines on sesame research.

Cropping-systems research continued to receive a high priority. A project in Jamaica was renewed for a second phase. The first 3 years of the project saw the successful development and evaluation on-farm of several improved cultivars and production systems for maize, sorghum, plantain, potato, yam, cabbage, and passion fruit. These new technologies have been well accepted by many small-scale farmers and the project will make special efforts during the second phase to monitor the extent of adoption and impact of the research.

Forestry

The forestry program continues to support social, or integrated, forestry designed to meet the needs of village communities and small landowners. Research to improve the supply of wood-based energy in the countryside and cities and to integrate trees into crop and livestock systems is now the priority topic within the program. The objective is to develop simple technologies that rural communities can apply easily. These priorities have been defined in the context of the Division's major theme of providing access to food. Clearly, the forestry program can seldom provide food directly; however, its support of research into integrated production systems and provision of energy does contribute to the overall objective of the Division. Equally, in its support for other areas of forest research — for example, bamboo and rattan — the program is concentrating on areas that can generate income, again in line with increasing access to, or purchasing power for, food.

Some initiatives developed during the year deserve special mention. In Asia, a new regional project links four countries and eight institutions in research on palmwood utilization. The stems of coconut, oil palm, and other palms offer a potential timber resource in many countries of Southeast Asia, and undertaking the necessary research jointly avoids duplication and assures the sharing of benefits.

In Pakistan, another project will transfer technology developed in an ongoing project in China for intercropping wheat with the multipurpose tree, *Paulownia*. Scientists from the Chinese project will provide the technical support.

Two other projects in agroforestry are of particular interest. The first is a new project in Zimbabwe that will investigate the short- and long-term effects on soil fertility of eucalypts, in particular the reported allelopathic effects between some species and agricultural crops grown with them in integrated systems. The second is an ongoing project in Peru to develop agroforestry systems for the small-scale farmers in the upper Amazon basin. A technically productive first phase is now being followed by a second in which work will concentrate on the economic aspects and the delivery of the technological package to farmers — this project is closely linked to the native fruit-tree project in Peru that was approved last year.

Support for research into bamboo and rattan continues to represent a major theme of the program, not only in Southeast Asia, but also now in Africa and South Asia. A total of 19 projects on this topic are now active. During the year, a film on bamboo was produced by the Communications Division in collaboration with staff of the forestry program.

Another example of collaboration with other divisions is forestry's participation in a project to combat the Chagas infection in Paraguay. The disease-carrying insects nest in the wooden houses of the region and Paraguayan timber technologists will work on simple improvements to house design to reduce this risk. Collaboration with the crop and animal production and the agricultural economics programs is now a regular feature in developing and monitoring projects in agroforestry.

Fisheries

The fisheries program continued to grow in 1987-1988. In Latin America, the Aquaculture Network is continuing to expand and a joint series of projects involving other programs of the Division has been developed. For instance, a mariculture-systems project in Chile and an aquaculture-development project in Colombia were approved this year. The network coordinator is based in Colombia and is playing a key role in leading these activities. The network now produces a newsletter and is establishing several specialized study groups to look at such specific technologies of aquaculture as genetics, breeding, and larval rearing. The projects on artisanal fisheries in this region are now moving into an implementation phase based on an integrated coastal development plan.

This year has seen an increased emphasis in Africa both in aquaculture and artisanal fisheries. New projects on pisciculture in Côte d'Ivoire and Mauritania, plus a project on integrated livestock and aquaculture in Cameroon, have greatly expanded the IDRC-funded aquaculture activities in this region. Strong aquaculture-economics components were necessary in Côte d'Ivoire and Mauritania to develop appropriate small-scale farmers' systems.

The second phase of a study on artisanal fisheries in the Casamance of Sénégal is of interest. This project follows on an earlier phase funded solely by IDRC's Social Sciences Division. The second phase involves linkages with

IDRC's Communications and Social Sciences divisions in addition to the agricultural economics program of AFNS. It is recognized that most fisheries activities are broadly based and require interdisciplinary holistic approaches and the program expects to receive increasing numbers of proposals, including economics and implementation components.

In Asia, the existing networks on disease, farming systems, and nutrition are being expanded with new projects in Indonesia, the Philippines, and Thailand. Of note is the large interdivisional project to establish an international centre for mariculture research and training at the Yellow Seas Fisheries Research Institute in Qingdao, Shandong Province in the People's Republic of China. This institution-building grant involves major support from the fisheries program as well as from the Fellowships and Awards and the Communications divisions.

In addition, the agricultural economics and fisheries programs of AFNS and the Social Sciences Division jointly funded the third phase of the Asian Fisheries Social Science Research Network.

A final interesting example of the new approaches available in IDRC's support package is the recent small-grants project approved with the Asian Fisheries Society. It is expected that this project will provide critical support to young Asian fisheries scientists to increase both their number and quality as well as to develop the Asian Fisheries Society itself as a regional body promoting fisheries activities.

Postproduction systems

The postproduction systems program continued to pursue, in 1987-1988, applied results and technology adaptation for food needs and income generation in a predominantly rural environment. Availability and nutritional adequacy of foods is a key objective of the program within three subprograms: food processing, utilization, and nutrition; food handling, storage, and drying; and equipment design, adaptation, and testing. These involve, respectively, transforming and preparing basic food commodities into more acceptable, usable, and nutritious forms; primary stabilization, preservation, and distribution of food commodities; and appropriate hardware and its application to specific problems identified in the first two categories.

Because much of what the program supports interacts with production and socioeconomic factors, a close working association with other programs of AFNS and IDRC divisions has been developed. Of 18 projects funded during the year, 9 involved some form of direct collaboration. A small-grants project was supported with the fisheries program in Asia, three fisheries projects were supported with the fisheries and agricultural economics programs in Latin America, a project on dehuller-milling systems was supported with agricultural economics in the Gambia, and a production and marketing project for oilcrops in the West Bank was jointly funded with the crop and animal production systems program. Two postproduction projects received additional support from the Communications Division to promote the application of research results on groundnut shellers in Thailand and on maize storage in Togo. A project to improve the groundnut industry evolved from a groundnut marketing study in the Philippines.

A relatively large project was jointly developed and funded with the Canadian International Development Agency (CIDA) to establish stronger, better focused, national programs on postharvest treatment of grains in the six countries of the Association of South East Asian Nations (ASEAN).

Nutrition improvement was a major theme of the program throughout the year. In addition to funding a project on infant foods in India, and contributing to a document on nutrition by a Centre working group, three program-development studies and a workshop were supported. The latter, with IDRC's Health Sciences Division and the United Nations Children's Fund (UNICEF), was on household food technologies to improve feeding of young children. The studies included diagnosing nutrition needs in rural India, adapting techniques of rapid rural appraisal from farming-systems research methodology, and evaluating the role and potential of nongovernmental organizations (NGOs) in nutrition-delivery programs in India.

Introduction of milling systems and dehullers remains a strong part of the program in semi-arid Africa where coarse grains are important. The focus of these projects has shifted from hardware development, a necessary but not sufficient entry point, to greater understanding of the beneficiaries' needs and enhanced food security. Projects were funded dealing with marketing of sorghum products in Kenya and Lesotho; dehuller pilot testing in the Gambia, Kenya, and Niger; and sorghum utilization in Tanzania.

The program continued support on the major issue of crop drying at the appropriate place, time, and cost within given food systems. A project was approved linking researchers at Queen's University in Canada with colleagues in five West African countries to improve solar-drying systems that are applicable at the farm level. The project continues laboratory studies of applied thermodynamics and computer simulation with field testing of improved models under various conditions and on different food commodities.

Agricultural economics

The agricultural economics program's major activity continues to be integrating social sciences into the development and introduction of technology in rural areas. During the year, increasing emphasis was put on the institutional aspects of changing technology. Credit is an important factor in technology introduction and, in Sénégal, an innovative project was funded on farmers' savings and credit that supports farmers' organizations to develop their own credit and rural institutions. A new project on national grain-quality economics links biological and social scientists in the International Rice Research Institute (IRRI) and eight Asian countries in determining what value the markets in each country put on each of the major characteristics of rice grain: this information will help biological scientists establish research priorities.

Eight projects based on crop and animal systems in six Latin American countries are working together to find the critical determinants that affect adoption of new technology in farming-systems research programs. A new initiative has been started in the Maghreb with three projects on pastoral systems to help define research priorities for the future. These projects

include two other AFNS programs plus the Women in Development Unit. It is hoped that the Social Sciences Division will join in the second phase of activities.

In line with the new emphasis on involving the poor in the research process, and in collaboration with other programs, IDRC divisions, and international donor agencies, two new activities on oilseed protein in Kenya and on natural-resource management on communal lands in Zimbabwe have been started in eastern and southern Africa. Both activities focus on bringing together all those concerned to work out a desired future before starting detailed research activities.

Communications

6 projects, \$0.8 million

The Communications Division plays a vital role in promoting the results of projects funded by other IDRC divisions by supporting a whole range of methods and means for disseminating research results as well as by encouraging their adoption and use. The Division also studies all strategies and methods used to better plan promotional activities for the Centre. What distinguishes the Communications Division in particular is the role it plays for the Centre throughout Canada as the unit responsible for the public affairs program and for establishing an education program on development.

Through funding granted to numerous Third World groups, the Communications Division supports a wide range of innovative projects developed by members of the electronic and print media, popular science writers, and editors of scientific publications, as well as scientists who are prepared to work in concert with communications specialists.

Over the past year, most projects supported by the Division have been aimed at utilizing research results. In Togo, West Africa, the second phase of the project on improving traditional maize storage techniques will consist mainly of efforts to disseminate results. The Division is cooperating on this project with the Agriculture, Food and Nutrition Sciences Division. In conjunction with the Social Sciences Division, which provided all funding for the first phase of research, these two divisions are also working on a project involving artisanal fisheries in southern Sénégal.

A very ambitious project involving three IDRC divisions — Agriculture, Food and Nutrition Sciences; Fellowships and Awards; and Communications — is aimed at making the Yellow Seas Fisheries Research Institute in Qingdao, in the People's Republic of China, an aquacultural training centre for developing countries. The Communications Division will be funding the production of written and audiovisual teaching materials. The Division is also involved in promoting techniques in China for planting *Paulownia*, a fast-growing tree used as a wind break and as a source of firewood and lumber. Spectacular results have been obtained thus far, especially after funding was provided by the Agriculture, Food and Nutrition Sciences Division. The goal of the project is to encourage the planting of *Paulownia*, not only in the 14 provinces in northern and southern China, but also in South America.

At the meeting of IDRC's Board of Governors in Nairobi, Kenya, in March 1988, Board members visited an agroforestry research site. The project, which is supported by the Agriculture, Food and Nutrition Sciences,

Social Sciences, and Communications divisions, forms an open-air forestry school. The research team has contributed greatly to promoting the concept of agroforestry, a promising technique that closely links farming, animal husbandry, and forestry. Research results will also be relayed to farmers by students and community groups.

In 1987-1988, the Communications Division also continued its support for scientific and technical publishing in Africa. In cooperation with the Agence de coopération culturelle et technique, individuals in charge of scientific publications in northern Africa participated in two workshops on desk-top publishing in Rabat, Morocco. Approval has also been given for a huge project aimed at restarting publication of three scientific periodicals in Côte d'Ivoire, Sénégal, and Tanzania, to be undertaken in conjunction with the Canadian Association of African Studies.

Another project supported by the Division will enable the University of the Philippines in Los Baños to develop five teaching modules on research management techniques. The modules include manuals, and examples are presented in a very lively manner on videocassette. Scientists involved in several IDRC projects should also be able to benefit from this course.

Publications

In 1986-1987, the Division published 51 monographs, proceedings, technical studies, and manuscript reports covering numerous areas of research receiving support from IDRC's other program divisions. These are listed on page 83 together with those publications resulting from Centre-funded research — titles are given in the original language of publication. Catalogues of IDRC's publications are available on request.

Magazines

The Division also administers, on behalf of the Centre, a number of development information services for a variety of audiences both abroad and in Canada. The Centre's quarterly magazine, *The IDRC Reports*, is an important element in these services. The magazine contains articles on research funded by the Centre and on subjects related to its work. The print run is 28 000 for the English, French (*Le CRDI Explore*), and Spanish (*El CIID Informa*) versions, with about 60% going to the developing countries, more than 22% within Canada, and the remainder to other industrialized countries. *The IDRC Reports* is published in January, April, July, and October. A special annual edition is published in Arabic.

Films

Last year, IDRC produced a documentary film titled *Bamboo: The Miracle Grass*. The film, which runs for 27 minutes, follows the multiple uses of this astonishing plant and examines the efforts made by Asian researchers to protect it and ensure its successful growth and development.

As with all IDRC films, *Bamboo: The Miracle Grass* is available as 16-mm prints or on videocassette (in NTSC, PAL, or SECAM signal systems and in U-matic, VHS, or Betamax formats). A catalogue of IDRC's films is available on request.

Earth and Engineering Sciences

26 projects, \$7.8 million

The Earth and Engineering Sciences Division is the new name for the Cooperative Programs Division, which was established as a result of the United Nations Conference on Science and Technology for Development held in Vienna in 1979. Initially an IDRC section and then a division, cooperative programs began in the fiscal year 1980-1981. They grew out of the perceived need for cooperation between research institutions in developing countries and those in Canada — before 1980, Third World institutions were almost exclusively the sole recipients of IDRC's grants.

Since the Division was established, it has had three main objectives: first, to develop the scientific and technical research capacity of participating Third World institutions and associations; second, to create lines of communication and exchange between Canadian scientists and those in developing countries; and, third, to encourage Canadian research groups to take a practical interest in the increasingly numerous and diverse problems that impede development in the Third World.

Over the years, the Division has been involved in a great many research projects, which fell into three main categories that have become the programs of the new Division. During 1987-1988, the Division was renamed the Earth and Engineering Sciences Division, a name that better reflects its main areas of activity. The new name also redefines its mandate, as only those programs described here are now eligible for funding.

Earth sciences

The Division's first program of specialization, established in 1983, is earth sciences, which comprises three subprograms: hydrogeology and hydrology, geotechnics, and a small sector on mining that includes agrogeology. The first two subprograms use engineering principles to deal with environmental problems of a geological nature, earthquakes and volcanos, soil erosion and slope instability, and water supply and potability. The third subprogram funds research into the efficient extraction and processing of local natural resources, especially industrial minerals for use by the poorest countries.

Technology for local enterprises

A second program, established in 1984, is technology for local enterprises. Specific areas of concentration, which fall under the broad heading of job creation, will be announced in the coming year. Generally, the program deals first with improving traditional labour-intensive techniques through the gradual, rational introduction of new technologies and second with developing methods for processing local animal-, vegetable-, and mineral-based natural resources.

Building industry, materials, and technologies

The third program, building industry, materials, and technologies, was launched last year and deals with the complex problem of shelter for the homeless. The program concentrates on using local materials and on

developing construction techniques that can use these materials. Funding research on startup of small- and medium-sized industries to manufacture construction materials from local natural resources is an essential element of this program.

New directions

In 1987-1988, the new Division funded several projects that reflect its new thrust. As part of the hydrogeology subprogram, the University of Quebec at Montreal is working with the Université de Niamey in Niger to define sites with high potential for water power. Through field observation, photointerpretation, and geophysical exploration, Canadian and African hydrogeologists hope to increase the success rate of very costly wells. Another project with similar goals is being conducted in neighbouring Burkina Faso, by the Centre d'études sur les ressources minérales of the University of Quebec at Chicoutimi and the Université de Ouagadougou. This team is evaluating the technique of hydraulic fracturing to stimulate unproductive wells.

The catastrophic mudslides that killed so many in Brazil in early 1988 emphasize the importance of research being conducted by the University of Alberta and the Pontificia Universidade Católica, Rio de Janeiro, to stabilize the sides of the spectacular hills that flank that country's economic capital. Once covered by dense tropical rain forest, these slopes are now home to hundreds of thousands of poor families. Researchers are attempting to determine how to stabilize the slopes and protect the shanty-towns that cling to them. In Malaysia, specialists from McGill University will be working with a team from the University of Malaya, the Technical University of Malaysia, and the Geological Survey of Malaysia to stabilize the soils of former tin-mining sites that have been filled in and on which subsidized rental housing has been built. This cooperative project will apparently involve a totally new method for restoring land gutted by strip mining, not only in Malaysia, but also in Burma, Indonesia, and Thailand. Again in the field of small-scale mining, the Division has agreed to fund a promising project of the University of Guelph and the Sokoine University of Agriculture in Tanzania. Canadian and Tanzanian scientists have already identified several reserves of natural mineral fertilizers that can be applied almost directly to farmers' fields. This work should make it possible to determine the feasibility of using natural phosphate-rich minerals.

Within the technology for local enterprises program, the Division has funded several projects to promote local job creation. For example, McMaster University and the Universidad de Concepción in Chile are working together to develop an antirust coating extracted from pine bark. In Bolivia, the University of Quebec at Chicoutimi and the Universidad Mayor de San Simón will show about 20 Bolivian small businesses how to use so-called "essential oils" from eucalypts to make detergents, soaps, and deodorants.

Lastly, an example of the building industry, materials, and technologies program is the joint undertaking of the National Research Council of Canada and the Instituto Tecnológico de Costa Rica to produce low-cost, durable asphalt shingles entirely from local materials.

Fellowships and Awards

27 projects, \$3.0 million

The Fellowships and Awards Division (FAD) is an active partner with the Centre's program divisions in training and upgrading administrators of research institutions, research managers, and researchers themselves. Its various programs are designed to respond to the training needs identified by specialists in the program divisions, both in Ottawa and in the regional offices, and most of the fellowships are granted on the recommendation of staff from the program divisions.

The main objective of the Centre's support for training is to increase the research capacity of Third World research institutions. FAD endeavours to meet this objective by offering various categories of awards, which vary in nature and number according to changing needs as perceived by the Centre. The program focuses principally on individuals from the least-developed countries, with the greater part of the Division's budget spent on individual training awards, which emphasize professional upgrading rather than basic training. Training takes place in centres of excellence located, in order of priority, locally, regionally, in Canada, or in another developed country; where training takes place outside the country of origin, the IDRC-award holder is expected to return home at the end of tenure.

The Division's activities focus on five programs: training for project development; training for program development; training for institutional development; specialized training; and training for careers in development — Canada.

Training for project, program, and institutional development

The first three elements of this program framework recognize a gradual shift in emphasis that places priority on strengthening indigenous Third World institutions. In this regard, two long-term projects worth particular mention are the Division's continued support for the graduate program in rural economics at the Centre ivoirien de recherches économiques et sociales (CIRES) in the Côte d'Ivoire and the master's degree program of the Consortium Graduate School that, although based at the University of the West Indies' campus in Jamaica, serves students from Guyana, Surinam, and throughout the West Indies. In the past year, the Division has also provided support to a network of deans and coordinators of graduate studies from universities in eastern and southern Africa to strengthen graduate education in that region.

The Division continues to collaborate with the other program divisions on projects related to their support for research. This collaboration may be in the form of joint funding of training projects but FAD also provides the design and coordination of training programs funded by other divisions. For example, the Division is working with the Health Sciences Division to organize a training program to improve health-systems research in Sri Lanka. This program will involve a consortium of Canadian medical schools working through the Canadian Association of Tropical Medicine and International Health.

In addition to the individual awards, listed on page 77, the Centre supported the enrollment of young trainees from developing countries at the Hague Academy of International Law — 21 for a 3-week training course and 7 for doctoral studies.

Specialized training

Under the program for specialized training, the Division continues to support the Pearson fellowships. Named after the former Canadian Prime Minister Lester B. Pearson, who was Chairman of IDRC's Board of Governors from 1970 until his death in December 1972, the fellowships are offered to young public servants from developing countries who have had at least 3 years' working experience in the service of their government. Candidates are nominated through Canadian missions abroad and IDRC's regional offices. Pearson fellows spend 9-12 months in Canada where they pursue a nondegree program made up of academic studies and a practical attachment with a government department. All Pearson fellows take part in a special program in public administration designed jointly by the School of Public Administration of Carleton University and the Faculty of Administration of the University of Ottawa. The 17 Pearson fellows for 1987-1988 are listed on page 77.

Training for careers in development — Canada

Under the program that supports training for careers in development for Canadians, the Young Canadian researchers' awards are designed for doctoral students registered in a Canadian university. The aim of this program is to encourage the students' involvement in scientific areas of concern to IDRC and to give them, at the same time, exposure to problems of Third World countries. At the doctoral level, students in the following fields are eligible to apply: agriculture, food and nutrition sciences, communications, information sciences, health sciences, social sciences, engineering, and earth sciences. Candidates at the master's level are restricted to the fields of health sciences, information sciences, communications/media, journalism, and financial and administrative management. Young Canadian professionals in communications/media and financial or administrative management are also eligible to apply. Study, placement, or research programs take place in Third World countries, for a period of up to 12 months. Award holders, who are listed on page 80, were selected jointly in collaboration with staff of other IDRC program divisions.

The Division also offers the John G. Bene fellowship in social forestry, administered by IDRC but funded from an endowment established by the estate of the late John G. Bene, a former governor of IDRC, and by public subscription. This fellowship is awarded to a postgraduate student in forestry whose research explores the problems and promise of forestry in economic and social development.

Health Sciences

72 projects, \$12.8 million

The Health Sciences Division completed a review and analysis of its operations in mid-1987 and then reorganized itself into three functional and interlocking programs that predominantly deal with people and their

communities — health and the community, health systems, and health and the environment. The Division believes that through the reorganization it will be better able to carry out its mission effectively and to evolve a balanced set of activities that will contribute directly to the improvement of the health and well-being of the poor.

Health and the community

The health and the community program will identify and develop action-oriented, community-based research initiatives. Priority will be given to projects that examine how economic and social conditions and human behaviour affect health. These will be complemented by projects examining strategies to improve the health of individuals, families, and communities, by involving them in possible solutions.

The research supported by the health and the community program will involve the community in its own social, economic, and environmental organization and several areas will be explored. The program will support research on the social, cultural, and economic factors that influence a community's acceptance or rejection of information about behavioural traits that improve, maintain, or impair the health of its members. It will stress experiments on ways of effectively conveying health information and knowledge, and of introducing technologies that influence community health, as well as the ways of stimulating communities to correctly and consistently apply information or properly use and maintain the new technologies. Great importance will also be given to an examination of the types of community organization that should be involved, and the methods that can be employed to allow these organizations to identify health needs and priorities and to initiate public action on means of addressing these needs.

Over the next 5 years, the health and the community program will develop or coordinate several overlapping themes in collaboration with the Division's other programs, other IDRC divisions, and other agencies. These themes will include the introduction and use of technologies, behaviour and transmission of communicable diseases, methodologies to promote participatory research, women and children in health promotion, health education, and strategies to improve the nutrition of women and children.

During the last fiscal year, the program approved a participatory project to study the role of women in health care in six Asian countries and to identify both health needs and means by which health care at the community level can be improved.

Another important project will look into the health management of the urban poor in four Asian cities and, in Latin America, a study on psychosocial support and pregnancy outcomes is the culmination of work on perinatal health previously supported in the region. This network study in four countries aims to show that psychosocial interventions in the home environment positively influence pregnancy outcomes, biologically and psychologically. Results could have important implications for health-services organization.

Health systems

The health systems program links the community and its health needs to the health-care systems and available or required services. These systems extend from ministries of health and tertiary-care facilities to health dispensaries and traditional health services in villages. The program will include research on appropriate health-care providers, the curricula necessary to train them, and the infrastructures required to give them sustained support and to manage the systems. The program has four major themes: management and delivery of health services, health services planning, health policy, and strengthening the research capacity of indigenous institutions. The present health-services research projects are being incorporated into this program.

An evaluation of the administration and management of health services is the first project with the Palestine Red Crescent Society. The study is intended to enhance decision-making and the allocation of resources for improving the health of the Palestinians. In Sudan, an important study will assess how the massive influx of refugees from neighbouring countries has affected the development, structure, and delivery of health services to both refugee and indigenous populations, with implications for other regions with refugee problems.

Another health systems project will attempt to evaluate the effectiveness of a particular type of primary-health worker in Indonesia, using established standards for comparison.

Health and the environment

The health and the environment program includes research on the physical and biological elements in the environment that directly or indirectly affect the health of the poor. This new program is incorporating projects, supported by previously existing divisional sectors, that focus upon health problems as identified by international, regional, and national experts. Health needs and priorities, identified by communities, that require a discipline- or subject-oriented research approach — for example, disease or disease-vector control — are being covered, as are research activities to develop appropriate technologies to maintain and improve the health of the poor.

To promote a better understanding of health-related environmental factors and the nature of the interplay between communities and their environments, the health and the environment program will also encourage discussion and research on water and water use, with a particular emphasis on accessibility to potable-water supplies and water quality. The living environment — factors encountered in both the outdoor and indoor environments — and the working environment — related to both rural and urban industries — are considered important components of health and the environment.

Several health and the environment projects represent phases in the ongoing development and utilization of technologies, especially as related to pumping systems in the People's Republic of China, Ethiopia, Kenya, Malaysia, and Sri Lanka. Research on bilharzia in Egypt is a further step in the assessment of a potentially cheap and simple plant extract that could be used at the community level to kill the snail that is the vital link in the

transmission of the disease to humans. In Bolivia, the health status of tin miners and their families is the subject of a study aimed at improving their environment.

Two other projects approved last year demonstrate interdivisional and collaborative activities. First, a cooperative project linking Tribhuvan University in Nepal and the University of Calgary, a joint project with IDRC's Social Sciences Division, will obtain quality-of-life baseline data for later evaluation of interventions by Nepalese communities. The second one with the Earth and Engineering Sciences Division will examine groundwater quality in densely populated peri-urban areas of Dar es Salaam in Tanzania.

Information Sciences

52 projects, \$8.6 million

The work of the Information Sciences Division is directed toward three principal objectives: to improve information systems, services, and tools for managing and using information for development research and change; to build local capacity for effective management and application of information; and to foster cooperation and coordination in development research through information-sharing. The Division carries out this work by supporting practical projects that focus on specific information problems and needs in developing countries.

National projects

The projects supported in 1987-1988 reflect the diversity of target audiences who can benefit from improved availability of information — from national planners to local farming communities. A large project to assist the government of Jordan provides an interesting example of an integrated approach to the planning and implementation of information activities at the national level. The establishment of a national information system in Jordan will strengthen national planning, decision-making, and research and will provide services to public and private organizations. This complex project, which involves the participation of sectoral specialists from across the Division, addresses several information issues: developing information infrastructures at the national level; coordinating introduction of modern information technologies; disseminating scientific, technical, and socioeconomic information; and training in technical skills. Experience gained in Jordan could provide a useful model for other countries.

Modern information technologies can also have a more direct relevance to the ultimate beneficiaries of research supported by the Centre. Satellite-based remote sensing is commonly used to obtain data for planning and policy-making, but artisanal fishermen in Chile are full participants in a research project that is using remote sensing to help locate potential fishing zones. In this project, software and information are being developed and tested to improve the prospecting strategy of these artisanal fishermen. Another project intended to have a practical effect on local communities will establish a cooperative information service among the 44 agricultural colleges in Thailand. The project will include analysis of farm management data on 25 high-priority commodities and will lead to the preparation of reference manuals for farmers, extension workers, agricultural students, and teachers.

With increasing attention being paid within the Division and the Centre as a whole to the problems of African development and of “reaching” the rural poor, the particular difficulties brought on by the lack of communications infrastructure and the “last-mile” problem are of increasing importance to the programs of the Information Sciences Division. An innovative project with the Lesotho Telecommunications Corporation will test a new technology — packet radio — that has great potential to solve some of these problems in a way that may prove cost-effective and relatively simple to implement. The experimentation will be carried out within Africa by African researchers and will represent the first time that this technology has been studied as a possible component of a national telecommunications system. The project could potentially demonstrate to other national telecommunications authorities that methods exist to allow them to expand communications services to a larger proportion of their population without resorting to capital-intensive, large-scale projects.

Another project containing an important experimental component is the development of a fisheries management information system in Trinidad and Tobago. Recognition of the need to protect and strengthen the local fisheries resource has prompted the government to examine and adapt modern techniques being used in Canada and elsewhere to computerize and manage fisheries data. The system will be used by planners and will provide advisory services.

Regional projects

The projects described so far in this report are national or subnational in scope. Many other projects have been directed at regional audiences. For example, two regional information networks on vocational training and skills development are being supported in parallel in Asia and Africa. In the health field, regional services will be provided in West Africa through support for the African documentation and information system on the major endemic diseases and, in the Middle East and North Africa, through the World Health Organization’s (WHO) regional water supply and sanitation network.

Another regional project will strengthen the information and documentation service for small industries provided by the Federation of Chambers of Commerce in Central Africa. On the global scale, a similar approach is being taken in a project that is, in effect, a network of regional services — the International Development Information Network on Research in Progress. This project will strengthen the five regional members of the Inter-regional Coordinating Committee of Development Associations (ICCDAs) and allow them to improve their local services and their information-sharing activities.

These examples of projects are taken from topics of ongoing priority within the Division. In addition, a new program sector was introduced in 1987-1988 in support of a policy decision to move toward decentralizing the dissemination, training, and maintenance of MINISIS, a powerful software package developed by the Division for library and other applications. To increase the self-sufficiency of the MINISIS-users’ group, three projects were approved in this sector: two will help establish local MINISIS resource centres in the People’s Republic of China and North Africa and the third

will support the activities of MINISIS resource persons for training and problem-solving in Latin America.

Although several innovative projects such as those described earlier were supported in 1987-1988, the Division also sought out opportunities to build upon earlier successful projects. A few years ago, the Centre supported the development of a microcomputer software package, REDATAM, to provide planners and researchers with ready access to census data for small geographical areas. The software was tested at three sites in Latin America and the Caribbean and has been welcomed enthusiastically. A second-phase project was approved in 1987-1988 to make the system even more useful for planning and for exploiting the results of the planned regional censuses in 1990. The structure of the data base will be modified to allow planning data from sectors other than population and housing to be included by providing system enhancements required by users and an interface to system software for computerized mapping and geographic information, and by introducing the REDATAM concept into regional planning and training for the 1990 census.

The successful results achieved in a project to establish a Latin American communications network for nongovernmental organizations (NGOs) highlighted some of the necessary ingredients for expanding networking in developing countries. This experience has prompted the Division to consider opportunities to replicate the approach in Asia and Africa. A project using this approach in Asia was approved in 1987-1988. It will produce useful knowledge needed to adopt data communications techniques and, at the same time, will build research capacity through the provision of more efficient information-transfer mechanisms.

Several other projects approved in 1987-1988 helped consolidate the results of earlier successful phases. For example, the Division supported the publishing and distribution of the national atlas of Ethiopia, which had been prepared with the assistance of a previous grant. In other sectors, further phases of support were provided to various specialized information centres and services including those concerned with buffalo, Asian fisheries, education research in Asia, and public administration in Latin America.

Divisional cooperation

Most of the projects concerned with specific sectoral interests are developed in consultation with other Centre divisions. In view of the converging interests, many of these projects are undertaken jointly. In addition to the major interdivisional program in support of Bharatiya Agro Industries Foundation, in India, the Division supported several projects in collaboration with other divisions. These include a project on watershed management in Nepal and support to a seaweed information centre in Asia and to the West African Farming Systems Research Network, all with the Agriculture, Food and Nutrition Sciences Division; support to the Asian Mass Communication Research and Information Centre, with Communications Division; to the Jordan National Information System and to the Diploma Program in Library and Information Sciences at the University of the South Pacific, both with the Fellowships and Awards Division; to the Handpump Communications Network, with the Health Sciences Division; and to the Southeast Asia Education Research Review and Advisory Group, the

Costa Rica National Information System for Science and Technology, and to a study on Benin's national languages, all with the Social Sciences Division. Jointly administered projects such as these take full advantage of the various specialized skills available within the Centre to support multidisciplinary development efforts.

Consistent with the Division's objective of promoting cooperation and information-sharing at the international level, several projects approved in 1987-1988 involved significant collaboration between institutions in Canada and the developing countries. With the partnership of Laval University's laboratory of remote sensing, Malian scientists will have the opportunity to adapt methodologies and examine the usefulness of satellite remote-sensing data in a project aimed at identifying potential sites for agricultural development in the Niger valley. In another collaborative project, two Canadian institutions, the Centre de Toxicologie du Québec and the Canadian Centre for Occupational Health and Safety, will be major participants in an international project coordinated by WHO. The project will develop a multilingual information package to assist developing countries in planning and introducing their own microcomputer-based poison-information services. A third collaborative project has teamed the Canadian Patent Office with the Economic Commission for Latin America and the Caribbean to help develop a patent-information system for the Caribbean.

Centre library

The Centre's Library is also active in managing and delivering information not only to IDRC's staff in Ottawa and in the regional offices but also to researchers in Centre-supported projects in Canada and throughout the world. The Library was reorganized in a major way in 1987-1988 to enhance its advisory and training role for IDRC projects and to handle more effectively the steadily increasing demands for document delivery and reference and research services — computerized literature searches increased by 79% over the previous year. To Canadian and international researchers interested in development-oriented topics, the Library offers its development data-base service. This service, now offering 11 data bases, provides access to bibliographic data and information on projects in the Third World. Over the year, the number of institutional users of the service has grown to 122, an increase of 10%.

Social Sciences

89 projects, \$11.4 million

During the fiscal year 1987-1988, the Social Sciences Division adjusted its support to Third World scientists, which is now channeled through five programs: population and development research, science and technology policy, urban and regional development, economic policy, and education. Also, a Women in Development (WID) Unit has been created. This unit is part of the Social Sciences Division but its mandate permeates all IDRC activities and it engages in joint projects with all other IDRC divisions.

Population and development research

The population and development research program supported projects in some new areas and consolidated past activities in others. Several investigations were financed in cooperation with the Health Sciences, Communications, and Earth and Engineering Sciences divisions. A network of research projects on adolescent fertility was supported in Benin, Cameroon, Congo, Côte d'Ivoire, Mali, Mauritania, Nigeria, and Sénégal on the determinants of early reproductive behaviour and its consequences on the social and health conditions of young mothers and their children. Another study was supported to consolidate previous research in the area of fertility and contraception in India.

Attention continues to be given to the conditions and adaptation of refugees in Africa. Studies were approved in Somalia and Sudan, thus expanding a research network that already included Botswana, Lesotho, Swaziland, and Tanzania. On the subject of labour migration, projects on seasonal migration in Bangladesh, Chile, and Mali will examine the interrelations between agricultural changes and population movements. Several research projects dealing with the social and demographic conditions of specific illnesses (malaria, leprosy, and Chagas' disease) will be done in Kenya, Paraguay, the Philippines, and Tanzania. These initiatives are the continuation of the program's efforts to move toward a better understanding of the demographic characteristics underlying morbidity processes, the identification of communities for self-help health activities, and the generation of interdisciplinary research.

The program concluded successfully an in-house project on population, health, and development addressed to support and strengthen the capacity of developing country investigators in carrying out research on the persistent problem of poor health and high mortality in infants and children. The proceedings of seven regional workshops in Latin America and Africa have been published, as well as two large research bibliographies and four major technical papers.

Science and technology policy

In the area of science and technology policy, emphasis has continued to shift away from microlevel studies of technical change and toward policy questions of technology choice in economic sectors that are significant in their contribution to employment, value added, and exports. This includes studies on technological and structural changes in the Turkish garment industry because of the introduction of new technologies; on the technological and economic adjustments necessary in the metal-working industry in Nicaragua; and on the vegetable-oil industry in Nigeria, small-scale aluminum enterprises in Ghana, electronics export-processing zones in Malaysia, and agroindustry in Uruguay.

A second area of priority has been studies of national allocation of financial resources and development of institutional structures that can help countries to absorb imported technological inputs more effectively and introduce appropriate domestic innovations. At the moment, little information is available to guide policymakers responsible for building up a local science and technology infrastructure. Science councils, universities, industrial research institutes, academies of science, and scientific and technological

information systems have all been copied and transplanted, often without modification, from the industrialized world. Are they the most appropriate models? Have they performed their tasks well? What lessons can be drawn from the experience of those countries that have set up such institutions?

Two projects will aim at answering these questions, one in Uruguay and one in Africa with the Economic Commission for Africa. The former project received a small supplement to explore further the linkages between scientific and technological inputs and dynamic economic sectors, and to provide assistance to a similar study in Costa Rica supported jointly with IDRC's Information Sciences Division. Another study, in India, will analyze the reasons for success and failure in a number of important national scientific institutions. A project in Colombia will support a major review of science and technology policy and institutions by the Fondo Colombiano de Investigaciones Científicas y Proyectos Especiales José de Caldas (COLCIENCIAS) in collaboration with the Planning Ministry and the U.N. Centre for Science and Technology for Development. A small beginning was also made in Nepal with a grant to the Royal Nepal Academy of Science and Technology, while the Ministry of Science, Technology and Energy, Thailand, was supported with a small supplement to prepare a document on science policy for Thailand. The year also witnessed the final seminar for a multicountry study on the role of national development banks in financing technological development. The seminar, organized by the Banco de la Provincia de Buenos Aires, was attended by representatives of major development banks throughout Latin America, as well as participants from the People's Republic of China, India, and South Korea.

Urban and regional development

In 1987-1988, the urban and regional development program continued to support policy-oriented research related to shelter and service delivery, informal sector enterprises, and urban management. Projects supported included two large international networks in Latin America on rental and shared housing and on municipal reforms and local governments. In Asia, the program supported a second phase of a network of research projects on export-processing zones and a project on street foods in India. In Africa, support included a project on assistance policies toward the informal sector in Kenya.

Three important international workshops were held on local government in Latin America, on the impact of regional development programs on disadvantaged groups in Asia, and on nonfarm employment in Asia.

Economic policy

The economic policy program continues to link researchers working on similar topics through several international networks. In 1987-1988, some of these networks were developed further. Researchers in Southeast Asia expanded the work done by African researchers on contract farming, a system that provides small-scale farmers with some of the inputs and services they need to compete in national and international markets. Researchers examining the debt problem in Latin America broadened their focus to include Africa and the Caribbean. The program also invited other donors to join it in supporting macroeconomic research and training in

anglophone Africa through the formation of a Consortium for Economic Research. Finally, the program collaborated with IDRC's Fellowships and Awards Division to add a training component to its Latin American Macroeconomics Network to ensure that young scholars with fresh perspectives continue to enter the region's research community.

Education

In 1987-1988, the education program continued its efforts to implement and consolidate strategies designed for the various regions of the developing world. Research on formal, nonformal, and popular education aimed at strengthening indigenous capacities to deal with social, economic, and cultural inequalities in education, on improving teaching-learning processes, as well as on the effectiveness of policy-making in education was supported. Activities in eastern and southern Africa addressed basic problems of individual and institutional capacity building through support to young researchers and networking efforts in Botswana, Ethiopia, Lesotho, Swaziland, Tanzania, and Zambia. Strengthening the relationship between school and community was the aim of a particularly innovative project in Uganda. In West Africa, a select number of activities was supported in areas of primary importance, including the role of local languages and the implementation of educational reforms.

In East, South, and Southeast Asia, issues of social equity, educational quality, and participation continued to be primary concerns. Networking activities through the regional research and advisory group in education received attention as a means to consolidate the links among researchers. Special activities in areas related to the study of qualitative research methodologies were initiated in India and Thailand, the former with the cooperation of the University of Alberta.

General activities supported by the program included workshops of African, Asian, and Latin American researchers, teachers, and educational practitioners; publication of state-of-the-art reviews on key problem areas for developing country researchers; and the development of joint activities with other international agencies including the World Bank and the Consultative Group on Early Childhood Care and Development.

Women in development

Last year, the Social Sciences Division established a new group with Centre-wide commitment — the Women in Development Unit. It was set up to support research on the integration of women into development and to act as a resource for gender-specific and gender-related research.

During its 1st year of operation, the Unit has supported 16 projects either alone or in collaboration with the Agriculture, Food and Nutrition Sciences, the Fellowships and Awards, the Health Sciences, and the Social Sciences divisions. One special initiative was the Intern Program, which made it possible for researchers to be attached to an IDRC division for up to 6 months, working concurrently on their own research and on concerns of the Unit. With the Fellowships and Awards Division, the Unit has also funded a Summer Institute on Gender and Development at Dalhousie University (Canada) and a meeting on Women and Natural Resource Management in Africa at York University (Canada).

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West and Central Africa (Dakar)

(Resigned 31 December 1987)

FINANCIAL COMMENTARY AND HIGHLIGHTS

For the 2nd consecutive year, the Centre's grant was reduced from its confirmed level and then supplemented during the fiscal year. The reduction, which amounted to \$2.2 million, was recovered in mid-December 1987. The total grant of \$108.1 million represented 4.0% of the 1987-1988 gross commitment for Official Development Assistance (ODA).

During 1987-1988, the Centre continued to follow the ongoing cost restraint program of the Government of Canada. This objective was achieved by maintaining a freeze on the staff complement at Head Office and by implementing a series of recommendations aimed at enhancing the efficiency and effectiveness of its operations.

Revenue

Total Centre revenues amounted to \$112.4 million, a 9.8% increase over 1986-1987. Revenues include the Parliamentary grant of \$108.1 million, investment and other income of \$2.2 million, and income for contract research of \$2.1 million. Figure 1 illustrates the trend in total revenue over the last 5 years.

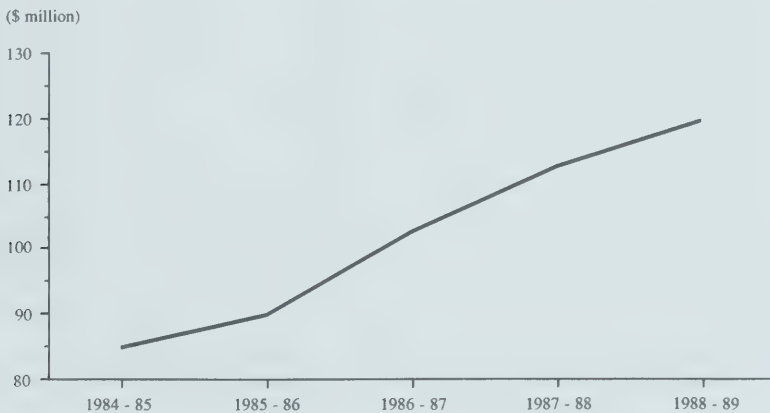


Figure 1. Total revenue for the Centre for 1984-1985 to 1988-1989 (budget values).

The Parliamentary grant of \$108.1 for 1987-1988 represents an increase of \$8.1 million over the 1986-1987 grant or 8.1%. The \$2.2 million of investment and other income in 1987-1988 exceeded the budgeted target of \$0.7 million. Investment income amounted to \$1.5 million compared to the budgeted \$0.5 million. The favourable variance is due to a higher than expected investment portfolio during the whole year. Other income amounted to \$0.7 million compared to a budget of \$0.2 million. This figure included \$0.3 million of MINISIS licence fees and \$0.4 million in other income. Contract research revenues totaled \$2.1 million in 1987-1988. This value includes \$1.4 million

received from the Canadian International Development Agency (CIDA) for research conducted or managed by the Centre on their behalf.

For 1988-1989, total revenue of \$119.5 million is projected, an increase of 6.3% over 1987-1988.

Expenditure

In 1987-1988, total Centre expenditures amounted to \$106.4 million. This amount represents an increase of \$5.4 million or 5.4% over 1986-1987. Figure 2 outlines the relative share of each category of expenditure for 1987-1988.

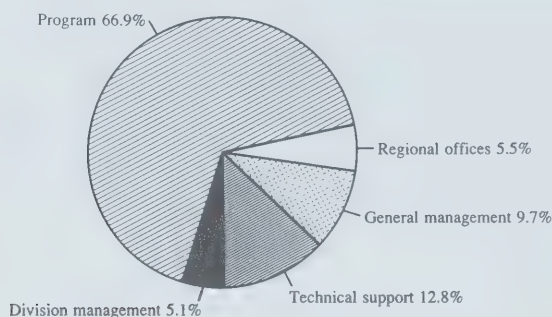


Figure 2. Breakdown of actual expenditure for 1987-1988.

The following table shows the 1988-1989 budget expenditures with actual expenditures reported for 1987-1988 and the previous 3 years.

EXPENDITURE (\$ millions)

	Budget		Actual							
	1988-89	% of total	1987-88	% of total	1986-87	% of total	1985-86	% of total	1984-85	% of total
Development research	\$ 73.2	60.4	\$ 62.4	58.6	\$ 60.4	59.8	\$54.6	59.7	\$49.8	58.6
Research-related activities	9.3	7.7	8.8	8.3	8.4	8.3	7.0	7.7	7.7	9.1
Technical support	15.2	12.6	13.6	12.8	12.9	12.8	12.0	13.1	10.7	12.6
Regional offices	7.4	6.1	5.8	5.5	5.4	5.3	5.0	5.5	4.5	5.3
Division management	6.1	5.0	5.4	5.1	4.5	4.5	4.2	4.6	4.0	4.7
General management	9.9	8.2	10.4	9.8	9.4	9.3	8.7	9.5	8.3	9.8
Total	\$121.1	100.0	\$106.4	100.0	\$101.0	100.0	\$91.5	100.0	\$85.0	100.0

Development research

Development research reflects the direct costs of all scientific and technical research projects supported by the Centre in developing countries. It is, in essence, the *raison d'être* of the Centre. This category includes support for Centre projects and international research networks; projects that are identified, developed, and managed by developing-country researchers; and contract research projects that are administered on behalf of other donor organizations.

In 1987-1988, expenditures for development-research activities totaled \$62.4 million or 58.6% of the Centre's total expenditures. Expenditures on existing projects that relate for the most part to development research were slightly lower than the 1986-1987 expenditures by 0.9%. However, expenditures on new projects increased by 13.4% over the previous year.

Research-related activities

Research-related activities include small projects that lead to the development of research projects and activities relating to information dissemination or application of research results. These activities also include a development-research library, which serves the Canadian development community as well as IDRC staff, and small projects that are supportive of ongoing programs of the Centre.

In 1987-1988, expenditures for research-related activities totaled \$8.8 million or 8.3% of the Centre's total expenditures.

Technical support

This category of expenditures includes the cost of program personnel, whose role is to develop new projects, monitor ongoing research projects, and provide technical assistance to recipients. Expenditures for technical support in 1987-1988 were \$13.6 million. This amount represented 12.8% of total Centre expenditures, the same as in 1986-1987.

For 1988-1989, technical support expenditures are budgeted at \$15.2 million, an increase of 11.5%, but the share of this category of expenditure to total expenditure will be reduced to 12.6%.

Regional offices

Six regional offices play an important role in facilitating contacts with grant recipients and in enhancing the Centre's ability to respond to Third World issues. These offices are located in Colombia, Egypt, India, Kenya, Sénégal, and Singapore. The total expenditure incurred in 1987-1988 to operate these offices amounted to \$5.8 million, an increase of 8.0% over 1986-1987. This category represented 5.5% of total Centre expenditures for 1987-1988.

For 1988-1989, regional office expenditures are expected to increase to \$7.5 million, an increase of 27.8%. It should be noted that 8.6% of this increase is due to a decision to reclassify some costs from the general management category to regional offices. As a result, this category's share of total Centre expenditures is expected to increase from 5.5% in 1987-1988 to 6.1% in 1988-1989.

Division management

Division management expenditures totaled \$5.4 million in 1987-1988, a 19.2% increase over 1986-1987, and amounted to 5.1% of the total Centre expenditures for 1987-1988. The increase is mainly due to the higher accommodation costs at the head office.

Expenditures for division management are expected to increase by 11.9% in 1988-1989 to about \$6.1 million. This category's share of total Centre expenditures will slightly decrease from 5.1% in 1987-1988 to 5.0% in 1988-1989.

General management

To support its overall operations, the Centre requires policy, executive, administrative, and service functions. Within the context of IDRC, such functions are represented by the Board of Governors; the offices of the Executive, Secretary and General Counsel, Treasurer, and Human Resources; and the Administration, Electronic Data Processing, and Internal Audit departments.

General management expenditures amounted to \$10.4 million in 1987-1988, an increase of 10.8% over 1986-1987. Most of the increase resulted from higher accommodation cost at head office. This category's share of total Centre expenditures has increased from 9.3% in 1986-1987 to 9.8% in 1987-1988.

For 1988-1989, the budgeted expenditures are set at \$9.9 million, a decrease of 4.8% from 1987-1988. As previously indicated under regional offices, the cost of certain activities, totaling \$0.5 million, are now charged to regional offices instead of general management. If this change is excluded, the 1988-1989 general management budget would remain at its 1987-1988 level of \$10.4 million.

Equity of Canada

The equity level as at March 31, 1988 increased to \$8.6 million from the \$2.6 million reported in the previous year. The high level of the year-end equity is due to higher than expected revenues and a lower rate of program expenditures, as already explained. For 1988-1989, the year-end equity is estimated to drop to a lower level.

Person-years

For 1987-1988, the Centre's person-years totaled 449.75 compared to a budget of 464. Vacancies were incurred primarily under technical support and resulted from delays in filling vacant positions. For 1988-1989, the number of person-years at head office remain at the budgeted 467 person-years.

Appropriations

Total Centre appropriations for 1987-1988 were \$124.9 million compared to \$111.5 million in 1986-1987 and represent a 12.0% increase over the previous year. Included in this amount are new projects for \$89.7 million representing 71.8% of the total amount appropriated during the fiscal year. Figure 3 shows the allocation of program appropriations by geographic region.

For 1988-1989, total appropriations are estimated to reach \$142.6 million with the program appropriations sharing \$104.0 million or 72.9% of the total.

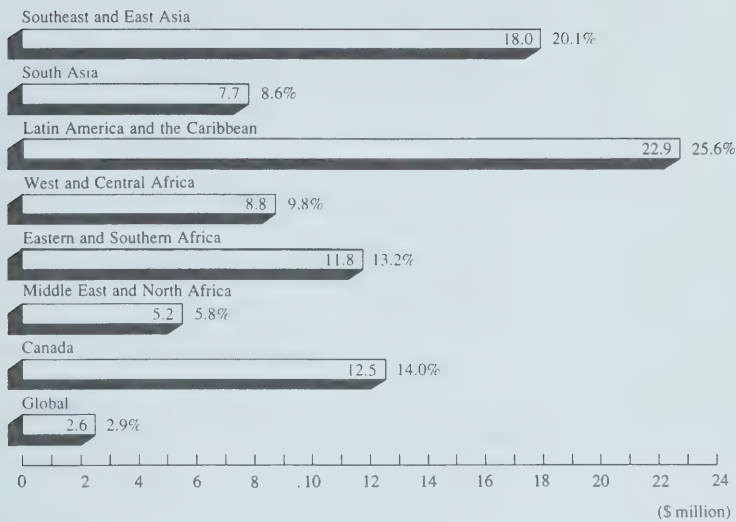


Figure 3. Actual appropriations for 1987-1988 by region.

Responsibility for financial statements

The financial statements have been prepared by management in accordance with generally accepted accounting principles appropriate in the circumstances. Management also assumes responsibility for all other information in the annual report, which is consistent, where applicable, with that contained in the financial statements. In support of its responsibility, management maintains financial and management control systems and practices to provide reasonable assurance as to the reliability of financial information, and that the assets are safeguarded and the operations are carried out effectively. The Centre has an internal audit department whose functions include reviewing internal controls and their application on an ongoing basis.

The Board of Governors is responsible for ensuring that management fulfills its responsibilities for financial reporting and internal control. The Board exercises its responsibilities through the Finance and Audit Committee whose members are not employees of the Centre. The Committee meets with management, the internal auditors, and the external auditors on a regular basis.

The Auditor General of Canada conducts an independent examination in accordance with generally accepted auditing standards and expresses his opinion on the financial statements. His examination includes a review and evaluation of the Centre's system of internal control and appropriate tests and procedures to enable him to report whether the financial statements are presented fairly. The external auditors have full and free access to the Finance and Audit Committee of the Board.

CENTRE TOTALS
FINANCIAL HIGHLIGHTS (\$ 000)

	Budget 1987-88	Actual 1987-88	% variance from budget	Actual 1986-87	1986-87 v 1987-88 (% change)
FINANCIAL ACTIVITY					
Revenue	\$108,800	\$112,417	3.3	\$102,401	9.8
Grant from Parliament of Canada	108,100	108,100	0.0	100,000	8.3
Investment and other income	700	2,210	215.7	978	126.6
Contract research	—	2,107	—	1,423	48.1
Expenditure	\$106,649	\$106,401	0.2	\$100,969	5.1
Existing projects	48,617	47,630	2.0	48,039	(0.1)
New projects*	21,971	23,552	(7.2)	20,764	13.1
Regional offices	6,139	5,828	5.1	5,394	8.1
Technical support	13,785	13,613	1.2	12,876	5.1
Division management	5,397	5,415	(0.3)	4,542	19.1
General management	10,740	10,363	3.5	9,354	10.1
Excess of revenue over expenditure (expenditure over revenue)	\$ 2,151	\$ 6,016	(179.7)	\$ 1,432	(320.1)
PROGRAM ACTIVITY					
Appropriations	\$125,767	\$124,904	0.7	\$111,517	12.1
New projects	89,706	89,685	0.0	79,351	13.1
Regional offices	6,139	5,828	5.1	5,394	8.1
Technical support	13,785	13,613	1.2	12,876	5.1
Division management	5,397	5,415	(0.3)	4,542	19.1
General management	10,740	10,363	3.5	9,354	10.1
Commitments	\$117,961	\$120,154	(1.9)	\$105,098	14.1
Projects	81,900	84,935	(3.7)	72,932	16.1
Regional offices	6,139	5,828	5.1	5,394	8.1
Technical support	13,785	13,613	1.2	12,876	5.1
Division management	5,397	5,415	(0.3)	4,542	19.1
General management	10,740	10,363	3.5	9,354	10.1

* Includes contract research.

CENTRE TOTALS
FINANCIAL HIGHLIGHTS (\$ 000)

	Budget 1988-89	Actual 1987-88	Actual 1986-87	Actual 1985-86	Actual 1984-85
RESULTS OF OPERATIONS					
Revenue	\$119,500	\$112,417	\$102,401	\$ 89,663	\$ 84,659
Grant from Parliament of Canada	114,200	108,100	100,000	86,000	81,000
Investment and other income	2,100	2,210	978	1,881	3,164
Contract research	3,200	2,107	1,423	1,782	495
Expenditure	\$121,100	\$106,401	\$100,969	\$ 91,486	\$ 85,003
Development research*	73,240	62,362	60,382	54,585	49,840
Research-related activities	9,300	8,820	8,421	7,003	7,731
Research operational support	28,690	24,856	22,812	21,183	19,129
General management	9,870	10,363	9,354	8,715	8,303
Excess of revenue over expenditure (expenditure over revenue)	\$ (1,600)	\$ 6,016	\$ 1,432	\$ (1,823)	\$ (344)
PROGRAM ACTIVITY					
Appropriations	\$142,590	\$124,904	\$111,517	\$102,199	\$102,778
New projects	104,030	89,685	79,351	72,301	75,346
Regional offices	7,450	5,828	5,394	4,947	4,456
Technical support	15,180	13,613	12,876	12,012	10,676
Division management	6,060	5,415	4,542	4,224	3,997
General management	9,870	10,363	9,354	8,715	8,303
Commitments	\$133,420	\$120,154	\$105,099	\$ 95,383	\$105,495
Projects	94,860	84,935	72,933	65,485	78,063
Regional offices	7,450	5,828	5,394	4,947	4,456
Technical support	15,180	13,613	12,876	12,012	10,676
Division management	6,060	5,415	4,542	4,224	3,997
General management	9,870	10,363	9,354	8,715	8,303
Outstanding commitments	\$109,600	\$ 96,000	\$ 88,343	\$ 88,900	\$ 82,317

* Includes contract research.

PERSON-YEAR LEVELS AND APPROPRIATIONS

	1988-1989	1987-1988		1986-1987	
	Budget	Budget	Actual	Budget	Actual
Program Divisions	300.00	297.50	285.50	300.50	280.75
Agriculture, Food and Nutrition Sciences	50.00	50.50	50.00	52.00	50.75
Health Sciences	36.00	35.00	35.00	35.00	30.75
Social Sciences	48.50	48.00	45.75	49.50	47.00
Information Sciences	41.50	39.50	37.75	40.00	36.00
Project-related staff	37.50	39.50	36.75	39.00	36.75
Earth and Engineering Sciences	19.00	18.00	15.50	18.00	17.50
Fellowships and Awards	12.00	12.00	11.75	12.00	11.25
Communications	25.50	26.00	22.25	25.00	23.50
Project-related staff	19.00	18.00	19.75	19.00	17.00
Office of Planning and Evaluation	11.00	11.00	11.00	11.00	10.25
General Management	161.50	163.50	161.25	162.75	159.00
Executive Office	18.00	19.00	19.00	19.00	19.75
Office of the Secretary and General Counsel	15.00	15.00	16.25	18.75	17.50
Office of the Treasurer	39.00	97.00	92.00	93.50	92.00
Administration*	37.00	—	—	—	—
Electronic Data Processing*	14.00	—	—	—	—
Office for Human Resources	19.50	19.50	21.50	18.50	17.00
Regional Offices Administration	14.00	8.00	8.00	8.00	8.00
Internal Audit	5.00	5.00	4.50	5.00	4.75
Secondments/sabbatical/study leave	5.00	3.00	3.00	3.50	3.50
Total	466.50	464.00	449.75	466.75	443.25

* Included under the Office of the Treasurer in previous years.



AUDITOR GENERAL OF CANADA

VÉRIFICATEUR GÉNÉRAL DU CANADA

AUDITOR'S REPORT

To the International Development Research Centre
and the
Secretary of State for External Affairs

I have examined the balance sheet of the International Development Research Centre as at March 31, 1988 and the statements of operations, equity of Canada and changes in financial position for the year then ended. My examination was made in accordance with generally accepted auditing standards in Canada, conforming with International Auditing Guidelines, and accordingly included such tests and other procedures as I considered necessary in the circumstances.

In my opinion, these financial statements present fairly the financial position of the Centre as at March 31, 1988 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Kenneth M. Dye, F.C.A.
Auditor General of Canada

Ottawa, Canada
June 6, 1988

INTERNATIONAL DEVELOPMENT RESEARCH CENTRE

BALANCE SHEET as at March 31, 1988

	1988	1987
ASSETS		
Current		
Cash and short-term deposits (Note 3)	\$18,804,032	\$ 9,181,248
Accounts receivable	739,013	555,699
Prepaid expenses	973,566	700,665
	<u>20,516,611</u>	<u>10,437,612</u>
Recoverable deposits	197,721	444,754
Property and equipment (Note 4)	3,427,620	3,310,258
Endowment funds (Note 5)	151,273	138,465
	<u>\$24,293,225</u>	<u>\$14,331,089</u>
LIABILITIES		
Current		
Accounts payable and accrued liabilities (Note 6)	\$ 9,421,661	\$ 7,974,540
Contract research (Note 7)	685,697	915,689
	<u>10,107,358</u>	<u>8,890,229</u>
Accrued employee separation benefits	2,541,719	2,477,240
Deferred rent - Head Office	2,921,709	270,229
Endowment funds (Note 5)	151,273	138,465
EQUITY		
Equity of Canada	8,571,166	2,554,926
	<u>\$24,293,225</u>	<u>\$14,331,089</u>

Approved:



President



Treasurer

INTERNATIONAL DEVELOPMENT RESEARCH CENTRE

STATEMENT OF OPERATIONS for the year ended March 31, 1988

	1988	1987
EXPENSES		
Development research		
Project grants	\$ 53,953,596	\$ 51,999,681
Centre projects	6,301,802	6,959,083
Contract research (Note 7)	2,107,575	1,422,803
	<u>62,362,973</u>	<u>60,381,567</u>
Research-related activities		
Project development and support	4,909,033	4,893,498
Information dissemination	2,428,098	2,131,104
Development-research library	1,482,233	1,394,237
	<u>8,819,364</u>	<u>8,420,839</u>
Research operational support		
Technical support	13,812,313	12,876,019
Regional offices	5,827,616	5,394,586
Division management	5,415,467	4,541,789
	<u>24,855,598</u>	<u>22,812,394</u>
Total research and support expenses (Schedule 1)	96,037,935	91,614,800
General management expenses (Schedule 2)	10,362,988	9,353,755
	<u>106,400,923</u>	<u>100,968,555</u>
REVENUE		
Grant from Parliament of Canada	108,100,000	100,000,000
Investment and other income	2,209,588	977,911
Contract research (Note 7)	2,107,575	1,422,803
	<u>112,417,163</u>	<u>102,400,714</u>
EXCESS OF REVENUE OVER EXPENSES	\$ 6,016,240	\$ 1,432,159

INTERNATIONAL DEVELOPMENT RESEARCH CENTRE

STATEMENT OF EQUITY OF CANADA
for the year ended March 31, 1988

	1988	1987
BALANCE AT THE BEGINNING OF THE YEAR	\$2,554,926	\$1,122,767
Excess of revenue over expenses	6,016,240	1,432,159
BALANCE AT THE END OF THE YEAR	<u>\$8,571,166</u>	<u>\$2,554,926</u>

INTERNATIONAL DEVELOPMENT RESEARCH CENTRE
STATEMENT OF CHANGES IN FINANCIAL POSITION
for the year ended March 31, 1988

	1988	1987
OPERATING ACTIVITIES		
Funds provided by (used for) operations		
Excess of revenue over expenses	\$ 6,016,240	\$ 1,432,159
Items not affecting funds		
Depreciation and amortization	944,724	1,095,018
Provision for employee separation benefits	356,694	357,568
Loss (gain) on disposal of equipment	(79,157)	11,502
	<u>7,238,501</u>	<u>2,896,247</u>
Accounts receivable	(183,314)	(94,684)
Prepaid expenses	(272,901)	44,858
Recoverable deposits	247,033	11,155
Accounts payable and accrued liabilities	1,447,121	(471,981)
Payment of employee separation benefits	(292,215)	(316,600)
Contract research	(229,992)	224,552
Deferred rent	2,651,480	270,229
	<u>10,605,713</u>	<u>2,563,776</u>
FINANCING ACTIVITIES		
Due to Government of Canada	—	(4,000,000)
INVESTING ACTIVITIES		
Additions to property and equipment	(1,088,862)	(1,354,825)
Proceeds on disposal of equipment	105,933	46,763
	<u>(982,929)</u>	<u>(1,308,062)</u>
INCREASE (DECREASE) IN FUNDS	<u>9,622,784</u>	<u>(2,744,286)</u>
CASH AND SHORT-TERM DEPOSITS, BEGINNING OF THE YEAR	<u>9,181,248</u>	<u>11,925,534</u>
CASH AND SHORT-TERM DEPOSITS, END OF THE YEAR	<u>\$18,804,032</u>	<u>\$ 9,181,248</u>

INTERNATIONAL DEVELOPMENT RESEARCH CENTRE

NOTES TO FINANCIAL STATEMENTS as at March 31, 1988

1. Authority and objective

The International Development Research Centre, a Corporation without share capital, was established in 1970 by the Parliament of Canada through the International Development Research Centre Act. The annual grant received from the Parliament of Canada is pursuant to External Affairs Votes 50 and 60 for the years ended March 31, 1988 and 1987 respectively.

The objective of the Centre is to initiate, encourage, support, and conduct research into the problems of the developing regions of the world and into the means for applying and adapting scientific, technical, and other knowledge to the economic and social advancement of those regions.

2. Significant accounting policies

The financial statements have been prepared in accordance with Canadian generally accepted accounting principles and reflect the following policies.

Property and equipment

Property and equipment are recorded at cost and depreciated over their estimated useful lives. Leasehold improvements are amortized over the terms of the respective leases. The methods and rates used to provide for the depreciation and amortization of property and equipment are:

	Method	Rate (%)
Computer hardware	Straight line	20
Leasehold improvements	Straight line	5-100
Office furniture and equipment	Diminishing balance	20
Vehicles	Diminishing balance	30
Telephone system	Straight line	20

Expenses

Expenses are recorded on the accrual basis, except for contract research expenses, which are charged to operations when disbursed.

Recognition of revenue

Parliamentary grants are recorded as revenue when received. Investment interest and endowment funds income are recorded when earned.

Revenue in respect of contract research is recognized at the time the related project expenses are incurred. Contract research funds received in excess of expenses are included in current liabilities.

Accrued employee separation benefits

Employees are entitled to specified termination benefits, calculated at salary levels in effect at the time of separation as provided for by conditions of employment. The liability for these benefits is recorded as the benefits accrue to employees.

Deferred rent

Any rent-free period or other benefits associated with long-term leases are deferred and amortized over the term of the lease on a straight-line basis.

Pension costs

Employees are covered by the Public Service Superannuation Plan administered by the Government of Canada. Contributions to the Plan are required from the employees and the Centre. These contributions represent the total liability of the Centre and are recognized in the accounts on a current basis.

Income taxes

The Centre is exempt from any liability for income taxes.

Foreign-currency translation

Monetary assets and liabilities are translated into Canadian dollars at the rate of exchange in effect at year-end. Nonmonetary assets are translated at rates prevailing at the respective transaction dates. Foreign-currency transactions are translated into Canadian dollars by the use of an average exchange rate that closely approximates the rate in effect at the transaction date. Exchange gains and losses are included in operations for the current year.

3. Cash and short-term deposits

	1988	1987
Cash (bank overdraft)	\$ 211,052	\$ (2,062)
Short-term deposits		
Canadian chartered banks	13,731,820	6,904,367
Trust and mortgage companies	3,867,140	—
Commercial enterprises	994,020	990,300
Governments and governmental enterprises	—	1,288,643
	<u>\$18,804,032</u>	<u>\$9,181,248</u>

4. Property and equipment

	1988		1987	
	Cost	Accumulated depreciation and amortization	Net	Net
Computer hardware	\$3,326,957	\$1,611,086	\$1,715,871	\$1,523,464
Office furniture and equipment	1,673,489	1,049,157	624,332	743,182
Vehicles	1,062,733	522,188	540,545	502,084
Telephone system	740,903	453,341	287,562	394,525
Leasehold improvements	448,783	189,473	259,310	147,003
	<u>\$7,252,865</u>	<u>\$3,825,245</u>	<u>\$3,427,620</u>	<u>\$3,310,258</u>

Depreciation and amortization for the year amounted to \$944,724 (1987, \$1,095,018).

5. Endowment funds

In 1987, the estate of the late John Bene established a fund to provide a postgraduate fellowship in the field of social forestry. During the year, a former member of the Board of Governors of the Centre established a fund for applied or mission-oriented research.

	<u>1988</u>	<u>1987</u>
Balance at the beginning of the year	\$138,465	\$ —
Donations received	5,150	131,059
Interest income	12,658	7,406
Expenses	(5,000)	—
Balance at the end of the year	<u><u>\$151,273</u></u>	<u><u>\$138,465</u></u>
John Bene Governor	\$146,160 5,113	\$138,465 —
Total endowment funds	<u><u>\$151,273</u></u>	<u><u>\$138,465</u></u>

6. Accounts payable and accrued liabilities

	<u>1988</u>	<u>1987</u>
Accrued liabilities - projects	\$5,704,488	\$4,198,635
Accrued annual and other leave benefits	1,313,885	1,235,921
Other	2,403,288	2,539,984
	<u><u>\$9,421,661</u></u>	<u><u>\$7,974,540</u></u>

7. Contract research

Contract research relates to research conducted or managed by the Centre which is funded by other international agencies, the Canadian International Development Agency (CIDA), and other federal government entities.

Contract research expenses of \$2,107,575 (1987, \$1,422,803), include \$1,436,190 received from CIDA (1987, \$1,198,162). In addition, the Centre received \$56,489 as an administration fee from CIDA (1987, \$51,334) which is included in investment and other income.

Contract research current liabilities of \$685,697 (1987, \$915,689) include \$332,537 held on behalf of CIDA (1987, \$661,459).

8. Operating leases

The Centre has entered into various lease arrangements for office premises, equipment, and staff accommodation, in Canada and in various countries. The total annual payments under such lease arrangements will be:

Year ending March 31

1989	\$ 5,071,598
1990	3,691,120
1991	3,608,161
1992	3,659,203
1993-1997	19,721,343
	<u>\$35,751,425</u>

9. Contractual commitments - project grants and project development

The Centre is committed to make payments totaling up to \$96,000,000 during the next 4 years subject to funds being provided by Parliament and subject to compliance by recipients with the terms of project agreements. The Centre has also submitted formal grant offers to prospective recipients totaling \$26,100,000 and is awaiting acceptance of these offers.

10. Contingencies

The Centre is a defendant in two actions for damages and costs allegedly sustained by the plaintiffs. Management and counsel are of the opinion that the Centre has defences against these claims and accordingly no provision has been made in the financial statements in respect of them. The claims are not significant to the operations of the Centre.

11. Comparative figures

The 1987 figures have been reclassified to conform to the statement presentation adopted in 1988.

INTERNATIONAL DEVELOPMENT RESEARCH CENTRE
SCHEDULE OF RESEARCH AND SUPPORT EXPENSES
for the year ended March 31, 1988

	1988			1987
	Development research	Research-related activities	Research operational support	Total
Programs				
Agriculture, Food and Nutrition Sciences	\$21,708,441	\$ 785,668	\$ 4,639,817	\$26,177,781
Social Sciences	10,691,650	675,855	3,526,323	14,437,468
Information Sciences	6,440,722	641,695	2,872,013	11,350,106
Health Sciences	8,300,072	572,072	2,945,824	11,817,968
Fellowships and Awards	5,670,724	179,400	990,230	6,779,376
Earth and Engineering Sciences	8,332,577	528,413	1,288,443	6,449,158
Program-related activities				
Regional offices	—	900,011	5,827,517	6,767,420
Information dissemination	564,460	3,420,000	2,009,035	5,001,593
Special program activities	2,204,176	371,463	—	2,575,639
Development-research library	—	1,407,533	—	1,407,533
External liaison and relations	—	215,656	756,296	971,952
	\$62,362,973	\$8,819,364	\$24,855,598	\$96,037,935
				\$91,614,800

INTERNATIONAL DEVELOPMENT RESEARCH CENTRE

SCHEDULE OF GENERAL MANAGEMENT EXPENSES
for the year ended March 31, 1988

	1988	1987
Salaries and benefits	\$ 6,523,077	\$6,065,602
Rent and utilities	1,460,730	1,004,136
Office and sundry	643,705	638,654
Travel and relocation	513,214	488,402
Governors' meetings	363,618	238,885
Depreciation and amortization	323,311	535,439
Professional and special services	270,587	185,141
Telecommunications	174,484	164,208
Working group expenses	62,258	-
Insurance	28,004	33,288
	<u>\$10,362,988</u>	<u>\$9,353,755</u>

Projects for which funds were approved during the fiscal year 1987-1988¹

Agriculture, Food and Nutrition Sciences

86-0263 Root-crop utilization (the Philippines)

For the Visayas State College of Agriculture, Pasay, to develop and test schemes to provide simple, low-cost technologies for the local processing of cassava and sweet potato. \$166 000 — 36 months.

87-0001 National grain-quality economics (Asia)

For the International Rice Research Institute, the Philippines, to estimate implicit values for rice-grain quality characteristics in the domestic markets of eight Asian countries: Bangladesh, Burma, India, Indonesia, Malaysia, Pakistan, the Philippines, and Thailand. \$88 500 — 18 months.

87-0007 Plantain production improvement (Colombia)

For the Instituto Colombiano Agropecuario, Bogotá, to increase and stabilize plantain productivity in the target areas of Colombia by identifying and distributing superior cultivars and developing and transferring appropriate agronomic practices. \$246 600 — 36 months.

87-0013 Palmwood utilization (Asia)

For the Asian and Pacific Coconut Community, Indonesia; the Forest Research Institute, Malaysia; the Forest Products Research and Development Institute, the Philippines; and Kasetsart University, Thailand, to develop techniques for the utilization of palm stem wood and to promote its processing and use by small- and medium-scale industries in the Asia and Pacific Region. \$412 000 — 36 months.

87-0014 Dry zone afforestation (Zimbabwe) — Phase II

For the Zimbabwe Forestry Commission, Harare, to enable the Forest Research Centre to provide the local population with fuelwood and building poles by establishing three plantations in the semi-arid and arid regions of the country and to integrate such plantations with local pastoral and agricultural activities. \$281 500 — 48 months.

87-0015 *Acacia albida* (Burkina Faso)

For the ministère de l'Enseignement supérieur et de la Recherche scientifique, Ouagadougou, to enable the Institut de recherche en biologie et écologie tropicale to make *Acacia albida* plants of known provenance with small intraspecific variability and high production available to peasants. \$110 400 — 36 months.

87-0016 Sugarcane substitution (Ecuador)

For the Instituto Interamericano de Cooperación para la Agricultura, Quito, to enable the Centro de Reconversión Económica del Azuay, Cañar y Morona, Santiago, to generate agricultural production alternatives to sugarcane currently grown by small farmers in the Yunguilla Valley so as to preserve or improve family income and labour utilization. \$219 800 — 36 months.

87-0018 Farming systems (Costa Rica) — Phase II

For the Universidad de Costa Rica, San José, to develop improved crop and animal production technologies for use by small-scale farmers in the lowland humid tropics. \$369 500 — 36 months.

87-0019 Dehuller testing (Niger)

For the Institute for the Study and Application of Integrated Development, Niamey, to introduce and test the mini-CRS dehuller in Niger and determine its overall suitability for rural application. \$70 000 — 24 months.

87-0021 Hill crops (Nepal)*

For the Department of Agriculture, Kathmandu, to enable its Agricultural Botany Division to establish a hill-crop improvement program to increase and sustain production and productivity of neglected hill cereals. \$485 000 — 36 months.

87-0022 Pasture improvement (Zimbabwe)

For the Ministry of Lands, Agriculture, and Rural Resettlement, Harare, to enable its Department of Research and Specialist Services to develop appropriate forage production technologies for the communal areas in Zimbabwe and to disseminate forage legume germ plasm. \$188 600 — 36 months.

87-0023 Dairy feeding systems (Tanzania) — Phase II

For Sokoine University of Agriculture, Morogoro, to strengthen the livestock systems research capability of its departments of Animal Science and Production

¹An asterisk indicates that the contract between IDRC and the recipient may not yet have been signed.

and Rural Economy to develop appropriate livestock feed technologies and test them on farms. \$209 800 — 36 months.

87-0024 Oilseeds (Nepal)*

For the Department of Agriculture, Kathmandu, to enable its national oilseed development program to raise and stabilize the production and yields of oilseed crops in Nepal through a well-functioning national oilseed development program. \$413 700 — 24 months.

87-0025 Oilseeds network (Ethiopia) — Phase III

For the Institute of Agricultural Research, Addis Ababa, to strengthen the oilseed research carried out in South Asia and eastern Africa by establishing effective, practical liaison between the national oilseed programs. \$391 200 — 24 months.

87-0026 Peach palm and aroids (Costa Rica)

For the Universidad de Costa Rica, San José, to enable its Centro de Investigaciones Agronómicas and its school of biology to improve the productivity and quality of peach palm by genetic and in vitro methodologies; and to consolidate a national program of virus-free seed production of aroids, specifically *Colocasia esculenta* and *Xanthosoma* spp. \$336 900 — 36 months.

87-0027 Groundnut industry (the Philippines)

For Isabela State University, Echague, and the National Food Authority, Quezon City, to develop an appropriate postproduction system for a groundnut farmers' cooperative, to increase its members' production and income, and to produce better quality, aflatoxin-free nuts for the market. \$234 300 — 36 months.

87-0032 Fish farming (Côte d'Ivoire)

For the ministère des Eaux et des Forêts, Abidjan, to enable the Projet de vulgarisation de la pisciculture en milieu rural to increase production by making clearly defined pisciculture systems and better training methods available to training agents and fish farmers. \$253 500 — 30 months.

87-0034 Seaweed (the Philippines)

For the University of the Philippines, Quezon City, to enable its Marine Science Institute to develop the necessary technical capability and research facilities to support a vigorous seaweed research and development program. \$406 700 — 36 months.

87-0035 Seaweed (Chile)

For the Universidad de Concepción to conduct a third symposium on the status of seaweed research in Chile and to prepare a document reporting on the results of the symposium. \$17 200 — 3 months.

87-0036 Infant foods (India)

For Maharaja Sayajirao University of Baroda, Vadodara, to systematically evaluate and promote the application of amylase-rich food in infant nutrition. \$208 400 — 36 months.

87-0038 Groundnut improvement (Mozambique) — Phase III

For the Universidade Eduardo Mondlane, Maputo, to assist smallholders by developing improved agronomic practices and varieties that are appropriate to their circumstances and to develop research capability at different levels for conducting this work. \$501 600 — 36 months.

87-0039 Oilseeds (Sri Lanka) — Phase II

For the Department of Agriculture, Peradeniya, to develop an effective, coordinated oilseeds research program aimed at generating improved varieties and technology for rainfed production by small-scale farmers in the dry and intermediate zones where annual oilseeds have the most potential. \$202 400 — 36 months.

87-0041 Groundnut mechanization (Thailand) — Phase III

For Khon Kaen University, Muang Khon Kaen, and the Ministry of Agriculture and Cooperatives, Bangkok, to improve land and labour productivity, groundnut quality, and farmers' income by introducing appropriate groundnut production and postproduction mechanization. \$213 500 — 24 months.

87-0048 Goat production systems (Nepal)*

For the Ministry of Food and Agriculture, Kathmandu, to enable its Department of Livestock Development and Animal Health to describe and assess current goat production in Nepal and test appropriate interventions to improve it. \$80 500 — 36 months.

87-0063 Sesbania germ plasm (Africa)

For the International Livestock Centre for Africa, Ethiopia, to increase the genetic base of *Sesbania* in its collection and to disseminate the germ plasm for evaluation among several African countries. \$11 000 — 2 months.

87-0070 Sesame research (India)

For the Tamil Nadu Agricultural University, Coimbatore, to identify and assess specific constraints to sesame production and develop methodologies to overcome them by supporting six doctoral studies on this topic. \$96 900 — 48 months.

87-0079 Forest regeneration (Chile) — Phase II

For the Instituto Forestal, Santiago, to develop suitable silvicultural techniques for the regeneration and management of the depleted native woodlands of the semi-arid zone of central Chile and to provide technical support to other IDRC-supported afforestation research projects in Latin America. \$395 200 — 36 months.

87-0082 Asian Fisheries Society small grants (Asia)

For the Asian Fisheries Society, the Philippines, to provide small research grants to young scientists to carry out indigenous fishery research in Asian developing nations. \$420 700 — 36 months.

87-0110 Soil improvement by trees (Zimbabwe)

For the University of Zimbabwe, Harare, to investigate the effect of trees on soils with regard to their influence on fertility and their potential to enhance sustained crop productivity. \$131 800 — 36 months.

87-0113 Postharvest systems (China)

For Zhejiang Agricultural University, Hangzhou, to enable the Post-Harvest Technology Development Research Centre to define grain postharvest systems and identify needs for new technology to increase economic returns in those systems. \$105 100 — 24 months.

87-0114 Agroforestry (Kenya) — Phase II

For the Ministry of Environment and Natural Resources, Nairobi, to enable the Kenya Forestry Research Institute to continue developing agroforestry systems for the semi-arid areas of Kenya and other East African countries with a view to improving the inhabitants' quality of life. \$345 200 — 36 months.

87-0115 Minidehullers (the Gambia) — Phase II

For the Catholic Relief Services (CRS), Banjul, to promote the local manufacture and use of the mini-CRS dehuller. \$140 000 — 30 months.

87-0118 Cropping systems (Jamaica) — Phase II

For the Inter-American Institute for Cooperation on Agriculture, Kingston, to develop economically viable production systems acceptable to small farmers that will increase and stabilize farm income while preserving watershed resources. \$465 000 — 36 months.

87-0123 Postharvest economics advisor (Asia) — Phase II

For the Southeast Asian Ministers of Education Organization's Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA), the Philippines, to continue to provide an experienced scientist to develop SEARCA's postharvest economics and agribusiness research and training capabilities. \$177 000 — 24 months.

87-0128 Nile perch (Tanzania)

For the Tanzania Fisheries Research Institute, Dar es Salaam, to develop fishing methods and practices that will ensure maximum long-term benefits from Tanzania's Lake Victoria fishery resources. \$182 200 — 36 months.

87-0130 Maize storage (Togo) — Phase II

For the Université du Bénin, Lomé, to encourage farmers to adopt improvements to traditional storage systems in southern Togo as a means of increasing the quantity and quality of maize stored on farms. \$249 400 — 39 months.

87-0131 ASEAN grains postharvest program (Southeast Asia)*

For the Ministry of Agriculture and Cooperatives, Thailand, to improve the cereal and legume

postharvest systems in countries of the Association of South East Asian Nations (ASEAN), allowing farmers and small entrepreneurs to produce good quality products and improve their livelihood. \$250 000 — 60 months.

87-0132 Food legumes (Mali) — Phase III

For the ministère de l'Agriculture, Bamako, to enable the Institut d'économie rurale to develop high-yielding, stable, and drought-, insect-, and disease-resistant cultivars of cowpea and 'Bambara' groundnut of acceptable quality. \$259 800 — 36 months.

87-0133 Integrated pest management (the Philippines)

For the University of the Philippines at Los Baños to improve the health, productivity, and income of rural households in rice-growing regions by introducing integrated pest-management techniques. \$108 100 — 24 months.

87-0135 On-farm sesame research (India)

For Tamil Nadu Agricultural University, Coimbatore, to enable Krishi Vigyan Kendra to improve sesame productivity through a sesame-based farming-systems approach that will contribute to the improvement of the general economic conditions of small-scale sesame farmers in three target areas in Tamil Nadu. \$160 700 — 60 months.

87-0149 Mariculture systems (Chile)

For the Universidad Austral de Chile, Valdivia, to establish an integrated system of mariculture as a means to promote development in the rural communities of the island of Chiloé. \$404 400 — 36 months.

87-0151 Aquaculture development (Colombia)

For the Fondo Colombiano de Investigaciones Científicas y Proyectos Especiales Francisco José de Caldas, Bogotá, to contribute to aquaculture development for small- and medium-scale producers in the southeastern region of Colombia through the adaptation and transfer of technology. \$269 000 — 24 months.

87-0161 Bharatiya Agro Industries Foundation: institutional support (India)

For the Bharatiya Agro Industries Foundation, Pune, to set up an institute for development research whose proposed program would include creating an information resources centre and undertaking research activities related to health systems, agricultural production, and postproduction systems. \$1 855 000 — 60 months.

87-0168 Mechanization and rural employment (Morocco)

For the International Center for Agricultural Research in the Dry Areas, Syria, to assist agricultural research and development institutions in the design of appropriate alternatives in the field of rural mechanization and employment. \$64 700 — 9 months.

87-0170 *Paulownia* (Pakistan)*

For the Pakistan Forest Institute, Peshawar, to evaluate the potential for incorporating *Paulownia* species in agroforestry systems. \$178 200 — 36 months.

87-0174 Olives (West Bank)

For the Arab Scientific Institute for Research and Transfer of Technology, El Bireh, to improve olive production and processing capability in the West Bank. \$96 600 — 36 months.

87-0177 Agroforestry (Peru) — Phase II*

For the Instituto Nacional de Investigación y Promoción Agropecuaria, Lima, to identify and test improved alternative agroforestry production systems for the Peruvian Upper Amazon Basin and strengthen the national agroforestry research capacity. \$376 600 — 36 months.

87-0179 Bamboo (Malaysia)

For the Forest Research Institute, Selangor, to upgrade and promote the production, development, and utilization of bamboos in Malaysia through scientifically sound techniques. \$170 000 — 36 months.

87-0180 Farm credit and savings (Sénégal)*

For the Fédération des organisations non-gouvernementales du Sénégal, Thiès, to develop and test an original saving and credit formula, the success of which would depend on the alliance of a rural bank with a federation of farmers' organizations. \$276 000 — 38 months.

87-0182 Dynamic analysis of farm data (Peru)

For the Centro de Estudios y de Desarrollo Agrario del Perú, Lima, to generate and test procedures to design, collect, and analyze small-farm records from four ecological areas of Peru, in such a way that applied research projects can make efficient use of such information. \$87 200 — 12 months.

87-0185 New agricultural policy (Sénégal)*

For the Institut sénégalais de recherches agricoles, Dakar, to characterize the response of various actors to the new agriculture policy for the groundnut-growing basin of Sénégal to consider possible adjustment measures. \$198 270 — 36 months.

87-0188 SPAAR forestry working group (Africa)

For the World Bank, USA, to enable the Special Program for African Agricultural Research (SPAAR), to carry out specific working-group activities and provide support for African representatives to participate in it. \$40 000 — 12 months.

87-0190 Asian Fisheries Social Science Research Network — Phase III

For the International Center for Living Aquatic Resources Management, the Philippines, to develop fisheries-social sciences research capacity as a partner with the fisheries, biological, and engineering sciences in planning and decision-making processes

for natural resource systems management in Asia. \$600 000 — 36 months.

87-0191 Alley cropping (Mali)*

For the International Livestock Centre for Africa, Ethiopia, to improve the productivity of breeding and of food crops in agropastoral systems by integrating woody fodder species with annual crops. \$99 300 — 36 months.

87-0197 Mycorrhiza network (Asia)*

For the Tata Energy Research Institute, India, to strengthen research, encourage cooperation, promote exchange of information and germ plasm, and facilitate transfer of technology through the establishment of a mycorrhiza research network in India. \$189 200 — 36 months.

87-0201 Banana and plantain network (Global) — Phase IV

For the International Network for the Improvement of Banana and Plantain, France, to further support its establishment and operations. \$150 000 — 12 months.

87-0205 Food legumes (Tunisia)*

For the Institut national de la recherche agronomique de Tunisie, Ariana, to increase and enhance food legume production, especially faba bean, chickpea, and lentil, in the major rainfed production zones of Tunisia. \$361 100 — 36 months.

87-0216 Rice prices and farmers' response (Asia)

For the International Rice Research Institute, the Philippines, to define the response of farm households to long-run declines in the price of rice in Indonesia and Thailand. \$38 900 — 18 months.

87-0222 Goats and sheep (Zimbabwe) — Phase II*

For the University of Zimbabwe, Harare, to enable its Department of Animal Science to develop and introduce feeding and management technologies appropriate for small ruminants in the communal areas of Zimbabwe. \$300 100 — 36 months.

87-0223 Buffalo for draft power (Thailand)

For Kasetsart University, Bangkok, to assess the need and potential for improving draft animal power (DAP) capacity on small farms, including a preliminary assessment of the possibilities for increasing DAP through improved nutrition. \$156 600 — 24 months.

87-0224 Dairy production systems (Ethiopia)*

For the Institute of Agricultural Research, Addis Ababa, to increase milk production in two regions of Ethiopia and to strengthen its capacity to conduct animal research. \$370 900 — 36 months.

87-0225 Dairy-beef production systems (Botswana) — Phase II*

For the Ministry of Agriculture, Gabarone, to enable its Department of Agricultural Research to increase milk production among small-scale

peri-urban livestock owners and to strengthen the national capacity to carry out animal-production systems research. \$395 300 — 36 months.

87-0226 Women in farming systems (Thailand)*

For the Ministry of Agriculture and Cooperatives, Bangkok, to enable the Farming Systems Research Institute to improve social and economic conditions for rural families through the transfer of affordable technology to women. \$95 800 — 24 months.

87-0227 Social forestry (Lesotho)*

For the Ministry of Agriculture, Maseru, to enable its Division of Forestry to develop an effective social forestry program throughout Lesotho. \$25 600 — 5 months.

87-0229 Faba beans processing (Egypt) — Phase II

For the University of Alexandria to enable its Faculty of Agriculture to develop and test improved equipment and processes for the production of *falafel* and *medamnis* by small- to medium-scale faba bean processors. \$41 300 — 12 months.

87-0230 Buffalo for draft power (India)*

For the Indian Council for Agricultural Research, New Delhi, to enable the Central Institute for Research on Buffaloes to assess the nutritional requirements of Murrah buffalo for maximum draft capacity, and thereby provide basic information required to design practical interventions to improve draft animal power on small farms. \$48 600 — 12 months.

87-0233 Tropical pastures network (Latin America) — Phase III*

For the Centro Internacional de Agricultura Tropical, Colombia, to improve livestock production systems in tropical Latin America by introducing low-input grass and legume pastures and to strengthen national capability in tropical pasture research. \$671 600 — 36 months.

87-0235 Integrated livestock and aquaculture (Cameroon)*

For the Ministry of Livestock, Fisheries and Animal Industries, Yaoundé, to enable its Fisheries Department to develop technically and socioeconomically appropriate integrated livestock-aquaculture packages. \$249 800 — 36 months.

87-0236 Tissue culture (India)*

For the Tata Energy Research Institute, New Delhi, to develop tissue-culture techniques suitable for tree species used in social forestry and wasteland development. \$157 600 — 36 months.

87-0237 Farming systems (China) — Phase II*

To provide the Chinese Academy of Agricultural Sciences, Beijing, with institutional support to enable the Crop Breeding and Cultivation Institute to promote the development and expansion of farming-systems research in China. \$489 000 — 36 months.

87-0240 Crop-animal systems (Asia) — Phase II*

For the International Rice Research Institute, the University of the Philippines at Los Baños, and the Institute of Animal Sciences, the Philippines, to increase productivity, income, and employment on small farms in Asia through farming-systems research with special emphasis on crop-animal interactions. \$327 500 — 36 months.

87-0242 Casamance artisanal fisheries (Sénégal) — Phase II*

For the Institut sénégalais de recherches agricoles, Dakar, to enable the Centre de recherches océanographiques de Dakar-Thiaroye to provide fisheries development programs in the Casamance with the necessary scientific support to improve the income of fishermen and farmer-fishermen. \$270 500 — 36 months.

87-0246 Vegetables (China) — Phase II*

For the Asian Vegetable Research and Development Center (AVRDC), Thailand, to improve vegetable production in China through further research cooperation with the Chinese Academy of Agricultural Sciences and the Ministry of Agriculture, Animal Husbandry and Fisheries, through the AVRDC's Regional Training and Outreach Program. \$454 600 — 36 months.

87-0254 Dairy-beef production systems (Guatemala) — Phase II*

For the Instituto Interamericano de Cooperación para la Agricultura, to enable the Instituto de Ciencia y Tecnología Agrícola, the Universidad de San Carlos de Guatemala, and the Dirección General de Servicios Pecuarios, Guatemala City, to improve small-farm dairy-beef production systems in six areas of Guatemala. \$404 000 — 36 months.

87-0255 Oil crops (Ethiopia)*

For the Institute of Agricultural Research, Addis Ababa, to develop higher-yielding cultivars of oil crops of improved nutritional value and to increase productivity through improved cultural practices. \$465 900 — 36 months.

87-0257 Sorghum utilization (Tanzania) — Phase II*

For Sokoine University of Agriculture, Morogoro, to improve and increase the utilization of sorghum in Tanzania. \$115 300 — 36 months.

87-0258 Muscovy ducks (Thailand)*

For the Asian Institute of Technology, Bangkok, to develop feeding strategies, using indigenous feeds, for duck production in integrated duck-fish systems. \$122 900 — 36 months.

87-0261 Triticale (Syria)*

For the University of Aleppo to enable the Faculty of Agriculture to strengthen its research capacity in the area of triticale production and use. \$276 300 — 36 months.

87-0262 Small ruminant-coconut systems (the Philippines)

For the Philippine Council for Agriculture and Resources Research and Development, Los Baños, to enable the Livestock Research Department to develop appropriate strategies for integrating small ruminants with coconut production. \$160 600 — 36 months.

87-0263 Irrigated forestry (Pakistan)*

For the Pakistan Forest Institute, Peshawar, to optimize the biomass yields of irrigated forestry plantations in Pakistan by improving the management and use of water resources. \$245 400 — 60 months.

87-0266 Fish breeding (Mauritania)*

For the Centre national de recherches océanographiques et des pêches, Nouadhibou, to maximize production of freshwater fish on the Mauritanian side of the Sénégal River. \$173 800 — 36 months.

87-0267 Vegetative propagation (Sénégal) — Phase II*

For the Institut sénégalais de recherches agricoles, Dakar, to enable the Département des recherches sur les productions forestières to use vegetative propagation techniques (cuttings, grafting, and in vitro culture) to produce high-yielding clones on a large scale so as to allow increased production of forest plantations. \$126 600 — 24 months.

87-0275 Sorghum-processing pilot plant (Kenya)*

For the Kenya Industrial Research and Development Institute, Nairobi, to encourage greater utilization of sorghum in dry, urban Kenya by introducing small-scale dehulling machinery. \$200 900 — 36 months.

87-0277 Rice-fish improvement (Indonesia)*

For the Agency for Agricultural Research and Development, Bogor, to enable the Sukamandi Research Institute for Food Crops and the Research Institute for Freshwater Fisheries to improve integrated rice-fish culture systems in Indonesia. \$410 000 — 36 months.

87-0285 Pearled-sorghum market survey (Kenya)*

For the Kenya Industrial Research and Development Institute, Nairobi, to determine household acceptance of, or resistance to, whole dehulled sorghum in selected urban areas of Kenya. \$46 900 — 15 months.

87-0290 Pastoral systems of the Maghreb (Tunisia)*

For the ministère de l'Agriculture, Tunis, to permit the Institut des régions arides to identify and test interventions to improve the living and working conditions of populations in the region and, at the same time, contribute to the stability of the environment. \$71 400 — 15 months.

87-0291 Pastoral systems of the Maghreb (Algeria)

For the ministère de l'Enseignement supérieur, Algiers, to enable the Centre de recherches en économie appliquée pour le développement to identify and test interventions to improve the living and working conditions of populations in the region and, at the same time, contribute to the stability of the environment. \$99 200 — 15 months.

87-0296 Research results utilization workshop (Colombia)*

For the Agriculture, Food and Nutrition Sciences Division, IDRC, to develop a strategy to increase the extent to which results from Centre-supported research are utilized. \$52 000 — 12 months.

87-0297 Smallholder agricultural innovation (Malawi)*

For the University of Malawi, Zomba, to enable its Chancellor College and Bunda College of Agriculture to understand the decision-making process used by smallholders in Malawi regarding agricultural innovations. \$24 000 — 18 months.

87-0300 Farming-systems classification (Colombia) — Phase II

For the Corporación de Estudios Ganaderos y Agrícolas, Bogotá, to develop a methodology for classifying farmers by regions and microregions, for use by national institutions in designing, implementing, and evaluating improved farm technology. \$152 700 — 24 months.

87-0328 Artisanal fisheries development (Colombia)*

For the Fondo Colombiano de Investigaciones Científicas y Proyectos Especiales Francisco José de Caldas, Bogotá, to enable the Instituto de Desarrollo de los Recursos Naturales Renovables (INDERENA) to provide institutional support to the INDERENA Artisanal Fisheries Division to enable it to take a leading role in the future Artisanal Fisheries Development (Colombia) project. \$30 000 — 6 months.

87-0338 Bivalve genetics (Chile)*

For the Pontificia Universidad Católica de Chile, Talcahuano, to determine and document the genetic and physiological characteristics of commercial bivalves now cultivated on the Pacific coast of Chile and Peru, as a prelude to their large-scale use in intensive mariculture. \$39 700 — 24 months.

87-1008 Agricultural marketing (Lesotho-Canada) — Phase II*

For the National University of Lesotho, Maseru, and the University of Saskatchewan, Saskatoon, to deepen and extend the research on agricultural marketing and to continue the ongoing process of consultation with the Government of Lesotho regarding research priorities and policy recommendations. \$274 400 — 32 months.

87-1009 Leaf spot (Costa Rica-Canada) — Phase II

For the Universidad de Costa Rica, San José, and the University of Alberta, Edmonton, to further develop, test, and disseminate nonhazardous chemical and biological control measures for leaf spot disease of coffee. \$328 700 — 36 months.

87-1010 Weevil resistance (Mexico-Zimbabwe-Canada) — Phase II

For the Centro Internacional de Mejoramiento de Maíz y Trigo and the Instituto Politécnico Nacional, Mexico City; the University of Zimbabwe, Harare; and the University of Ottawa, Ontario, to develop comprehensive selection criteria and to screen maize germ plasm under laboratory and field conditions for resistance to major storage pests. \$278 400 — 36 months.

87-1011 Phosphorus availability (Brazil-Ghana-Canada)

For the Universidade Federal de Pernambuco; the University of Ghana, Accra; and the Saskatchewan Institute of Pedology, Saskatoon, to recommend crop and fertilizer management practices that will enhance phosphorus-fertility and organic-matter conservation under sustainable, low-input agricultural production. \$280 400 — 36 months.

87-1014 *Bacillus thuringiensis elisa* (Global-Canada)

For the University of Western Ontario, London, to enable its departments of Chemical and Biochemical Engineering and of Microbiology and Immunology to produce an immunochemical test to facilitate identification of *Bacillus thuringiensis* in field isolates and improve quality control during production. \$28 600 — 12 months.

87-1022 Botanical pesticides (the Philippines-Canada)

For the Philippine Council for Agriculture and Resources Research and Development, Los Baños, and the University of Ottawa, Ontario, to identify and develop promising botanical pesticides for use by small-scale farmers within the context of integrated pest-management programs. \$301 800 — 36 months.

87-1026 *Bacillus thuringiensis* (Mexico-Nicaragua-Canada)

For the Centro de Investigación y Estudios Avanzados del Instituto Politécnico Nacional, Mexico City; the Ministerio de Desarrollo Agropecuario y Reforma Agraria, Managua; and the University of Western Ontario, London, to develop Mexico's and Nicaragua's capacity to produce effective and economical biological insecticides using *Bacillus thuringiensis*. \$353 300 — 24 months.

87-1027 Fish poisons (Thailand-Canada) — Phase II*

For Chiang Mai University and the University of British Columbia, Vancouver, to develop and test, under realistic conditions, promising natural piscicides for use in Thai aquaculture. \$277 400 — 24 months.

87-1028 Induced spawning (China-Canada) — Phase II

For Zhongshan University, Guangzhou; the University of Guelph, Ontario; and the University of Alberta, Edmonton, to further the development of the Department of Biology at Zhongshan University as a centre for applied research in fish hormonal physiology. \$287 500 — 24 months.

87-1029 Mariculture (China)

For the Ministry of Agriculture, Animal Husbandry and Fisheries, Beijing, to establish the Yellow Seas Fisheries Research Institute as an institution of international calibre for research and training in marine polyculture. \$482 500 — 36 months.

87-1031 Timber construction (Chile-Canada)

For the Instituto Forestal, Santiago, and the University of New Brunswick, Fredericton, to establish and disseminate the technical information required to promote the efficient use of Chile's abundant pine timber resource in local construction. \$426 700 — 36 months.

87-1040 Free convective dryers (West Africa-Canada) — Phase II*

For the Centre national d'études et d'expérimentation du machinisme agricole, Cameroon; the Ahmadu Bello University, Nigeria; the Centre d'études et de recherches sur les énergies renouvelables, Sénégal; the Ministry of Agriculture and Natural Resources, Sierra Leone; the Université du Bénin, Togo; and Queen's University, Ontario, to develop improved natural-convection solar crop dryers suitable for on-farm use and to encourage their use in West Africa. \$268 400 — 36 months.

87-1043 *Leucaena* psyllid biocontrol (Asia-Canada)*

For the Central Institute for Food Crops, Indonesia; the Philippine Council for Agriculture and Resources Research and Development; the Commonwealth Agricultural Bureaux's Institute of Biological Control, U.K.; and the Alberta Environmental Centre to reduce the *Leucaena* psyllid to the level at which it ceases to cause economically and socially significant damage, by means of imported natural enemies in conjunction with other control measures. \$256 500 — 36 months.

87-1049 Soil fertility and erosion (Nepal-Canada)*

For the Integrated Survey Section, Kathmandu, and the University of British Columbia, Vancouver, to identify and quantify the causes and nature of soil erosion, soil fertility decline, and sediment transport in small river basins in the hills of Nepal and to develop ways of improving biomass production on a sustainable basis. \$238 600 — 36 months.

87-1050 Sea urchins (Barbados-Canada)*

For the University of the West Indies, Cave Hill, and McGill University, Quebec, to determine stock structure and population dynamics of the sea urchin, *Trypanostoma ventricosus*, in Barbados and

neighbouring islands, to enhance the recovery of the sea-urchin population, and to develop models on which scientific management of the urchin fisheries may be based. \$74 200 — 36 months.

Communications

87-0069 Scientific publishing in North Africa

For the Institut agronomique et vétérinaire Hassan II, Morocco, to organize two workshops for 20 participants responsible for scientific publications in French in North Africa. \$73 800 — 9 months.

87-0199 Scholarly publishing (Africa-Canada)*

For the Canadian Association of African Studies, Ontario, to improve scholarly publishing in Africa and to encourage research and publishing collaboration between Canada and Africa. \$485 000 — 36 months.

87-0315 Minimum tillage: technology utilization (Kenya)*

For the University of Nairobi to enable its Department of Crop Science (Kabete Campus) to transfer current knowledge to extension workers in the Ministry of Agriculture and to develop communications strategies for wider dissemination of minimum-tillage technology to farmers. \$52 900 — 30 months.

87-0325 Integrated support for Research Management Centre (the Philippines)*

For the University of the Philippines at Los Baños, Laguna, to enable the Research Management Centre to enhance responsiveness, relevance, productivity, and efficiency of the science and technology system through teamwork, mutual support, and cooperation among research managers, researchers, and support staff. \$73 500 — 12 months.

87-0329 *Paulownia*: dissemination of research results (China-Latin America)*

For the Chinese Academy of Forestry, Beijing, to enable the Forest Research Institute to develop and implement a communications program to inform and educate targeted groups of farmers of the advantages of intercropping and planting *Paulownia* trees and to share China's knowledge and experience with interested groups in Latin America. \$49 500 — 30 months.

87-0345 Canadian public opinion survey

For the Communications Division, IDRC, to enable Decima Research, Toronto, to survey the beliefs, attitudes, intentions, and behaviours of Canadians with respect to the developing world. \$99 400 — 6 months.

Earth and Engineering Sciences

86-1027 Small-scale brick production (Nigeria-Canada)*

For the Nigerian Building and Road Research

Institute, Lagos, and the Prairie Masonry Research Institute, Alberta, to make adequate housing more accessible by reducing the cost of walling materials and also to create job opportunities by establishing small-scale brick-production units. \$255 000 — 24 months.

86-1029 Microprocessor modules for machine-tool and process-control applications (India-Canada)*

For Production Aids and Control Electronics (India) Limited, Hyderabad, and the Institut d'ordinateur du Québec, Sainte Thérèse, to develop and fully engineer 16-bit microprocessor modules for computer numerical control systems and process controls and to strengthen the research capacity of Production Aids and Control Electronics (India) Limited by providing hands-on experience with the latest development tools available at the Institute. \$593 455 — 24 months.

87-0333 Eppawala phosphate (Sri Lanka)*

For the Institute of Fundamental Studies, Colombo, to study the Eppawala phosphate deposit with a view to developing commercial production of partially acidulated fertilizers for local consumption. \$92 600 — 12 months.

87-0341 Calcarene (Mauritius)*

For the University of Mauritius, Réduit, to enable the School of Industrial Technology to improve housing conditions in Rodrigues by rationalizing the mining of calcarenite deposits and formulating specifications for the use of blocks derived from the deposits. \$21 000 — 24 months.

87-0342 Preventing Chagas' disease through improved housing (Paraguay)*

For the Universidad Católica "Nuestra Señora de la Asunción" to enable the Centro de Tecnología Apropiada and the Instituto de Investigaciones en Ciencias de la Salud to determine the effectiveness of various interventions to control Chagas' disease in rural areas. \$659 490 — 36 months.

87-1003 Harbour siltation (China-Canada)

For Nanjing University and the Department of Fisheries and Oceans, Nova Scotia, to identify sediment sources, to determine sedimentation rates, and to study the environmental effects of dredge spoils in and about the two ports of Sanyo and Yangpu of Hainan Island, to facilitate the design and maintenance of expanded harbour facilities. \$512 400 — 24 months.

87-1004 Industrial steel alloys (Brazil-Canada) — Phase II

For the Fundação Técnico-Educacional Souza Marques, Rio de Janeiro, and the Metallurgical Consulting Services Limited, Saskatchewan, to develop improved damage-assessment methods for chromium-molybdenum steel tubes to provide for safer operation and preventive maintenance and also to develop improved high-alloy, high-temperature tube material for the petrochemical industry. \$199 650 — 24 months.

87-1005 Asphalt roofing sheets (Costa Rica-Canada)*

For the Instituto Tecnológico de Costa Rica, Cartago, and the National Research Council of Canada, Ontario, to develop a low-cost and durable asphalt roofing sheet that will contribute to the provision of adequate housing facilities for the poor. \$332 600 — 36 months.

87-1006 Slope stability (Brazil-Canada)*

For the Pontificia Universidade Católica, Rio de Janeiro, and the University of Alberta, Edmonton, to characterize slope-stability hazards related to geotechnical behaviour of residual and colluvial soils in the Rio de Janeiro region, and to provide guidelines for urbanization plans in *favela* areas located on unstable slopes. \$271 600 — 24 months.

87-1007 Pollution associated with coal utilization (India-Canada)

For the Indian Institute of Technology, Bombay, and the University of Western Ontario, London, to evaluate the environmental impact, with respect to heavy metals, of large-scale coal consumption in actual and projected thermal plants and to study and propose remedial measures to minimize the observed deleterious effects through improved waste treatment or use of the waste products (or both). \$369 500 — 36 months.

87-1016 Altiplano hydrological system (Bolivia-Canada)*

For the Universidad Mayor de San Andrés, La Paz; the Universidad Técnica de Oruro; and Laval University, Quebec, to increase knowledge of the hydrological system of the Desaguadero River to propose solutions to past and future flooding problems and to contribute to the training of competent researchers in the field of hydrology and water resources. \$315 527 — 36 months.

87-1017 Productivity of aquifers in foundation rock (Burkina Faso-Canada)*

For the Université de Ouagadougou and the University of Quebec at Chicoutimi to increase the proportion of high-yielding drilling during future drilling campaigns to supply drinking water to small urban communities of Burkina Faso and eventually of other areas on the Precambrian metamorphic basement in Africa. \$305 623 — 24 months.

87-1018 Discontinuous aquifers (Niger-Canada)

For the Université de Niamey and the University of Quebec at Montreal to examine the structure and functioning of discontinuous basement aquifers through intensive study of localized sites in basins where there are operating hydraulic works to develop a hydrological model of national and regional value. \$309 230 — 36 months.

87-1020 Seismic-resistant quinchá construction (Peru-Canada)

For the Pontificia Universidad Católica del Perú, Lima, and the Technical University of Nova Scotia, Halifax, to evaluate the seismic performance of

quinchá dwellings with a view to developing an earthquake-resistant model. \$339 645 — 24 months.

87-1021 Carmine production from cochineal (Peru-Canada) — Phase II

For the Instituto de Investigación Tecnológica Industrial y de Normas Técnicas, Lima, and Simon Fraser University, British Columbia, to develop a technology for obtaining a high yield of commercial forms of carmine with a high carminic-acid content. The processes developed are to be scaled to the pilot-plant stage and the technology transferred to potential users. \$229 960 — 24 months.

87-1025 Essential oils (Bolivia-Canada)

For the Universidad Mayor de San Simón, Cochabamba, and the University of Quebec at Chicoutimi to promote the use of local renewable natural resources in the Department of Cochabamba and to develop a technology to allow the industrial production to be sold on the Bolivian market and, eventually, on foreign markets of the Andean zone. \$383 754 — 36 months.

87-1032 Ductile-iron foundry (Peru-Canada)*

For the Instituto de Investigación Tecnológica Industrial y de Normas Técnicas, Lima, and Queen's University, Ontario, to develop appropriate industrial practices for production of high-quality ductile-iron casings for the use of small- and medium-sized foundries in Peru. \$249 700 — 36 months.

87-1033 Volcanic-ash cement (Bolivia-Canada)*

For the Ministerio de Planeamiento y Coordinación, La Paz, and the University of Calgary, Alberta, to develop lime-pozzolan-cement (LPC) and LPC-based building materials for constructing low-cost housing for the poor. \$300 000 — 36 months.

87-1034 Technology adoption by SMEs (Thailand-Canada)*

For the Department of Industrial Promotion, Bangkok; TECHNINET Asia, Singapore; and the Saskatchewan Research Council and the University of Saskatchewan, Saskatoon, to design a system for improved access to and adoption of technology by individual small- and medium-sized enterprises (SMEs) by focusing on the efforts of various SME support institutions. \$214 200 — 18 months.

87-1035 Agrogeology (Tanzania-Canada) — Phase II*

For Sokoine University of Agriculture, Morogoro, and the University of Guelph, Ontario, to improve the agricultural capability of Tanzanian soils by using locally available geological resources. \$497 500 — 36 months.

87-1036 Pine tannins as anticorrosives (Chile-Canada)

For the Universidad de Concepción and McMaster University, Ontario, to develop the regional chemical industry relating to the use of *Pinus radiata* by-products and thus generate employment and income. \$107 600 — 24 months.

87-1044 Special electronics zones (Malaysia-Canada)*

For the Malaysian Institute of Microelectronics Systems, Kuala Lumpur, and Simon Fraser University, British Columbia, to undertake economic-industrial research on Malaysia's electronics industry in the export processing zones and to use the results of this research to guide national policy with respect to various issues. \$166 980 — 18 months.

87-1046 Slurry-pond reclamation (Malaysia-Canada)*

For the Universiti Malaya and the Universiti Teknologi Malaysia, Kuala Lumpur, and McGill University, Quebec, to develop an economic and efficient slurry-pond reclamation technique using, wherever possible, the technology, facilities, and resources available in the affected areas. \$348 900 — 36 months.

87-1048 SEAPOL (Southeast Asia-Canada) — Phase II*

For Chulalongkorn University, Thailand; the International Institute for Transportation and Ocean Policy Studies, Nova Scotia; and the University of Victoria, British Columbia, to continue to strengthen regional research capacity in the Law of the Sea, to produce policy papers for governments of countries of the Association of South East Asian Nations on management of natural resources, and to provide opportunities for informal consultation among states on contentious maritime issues. \$407 990 — 30 months.

87-1051 Partial carbonization of peat (Burundi-Canada)*

For the Office national de la tourbe, Bujumbura, and the Société d'ingénierie Cartier Limitée, Quebec, to develop small-scale technology to transform raw peat into coal (carbonized product) to meet household energy needs. \$145 365 — 16 months.

87-1052 Technology adoption by SMEs (Singapore-Canada)*

For the Singapore Institute of Standards and Industrial Research (SISIR), and the University of Saskatchewan and the Saskatchewan Research Council, Saskatoon, to identify the characteristics of small- and medium-sized enterprises (SME) that are successful in adopting technology and to design and test a system to improve the effectiveness of SISIR's technological assistance to SMEs. \$216 250 — 24 months.

Fellowships and Awards

87-0003 Regional training course on advanced biogas reactor (Southeast Asia)

For King Mongkut's Institute of Technology, Thailand, to develop a research, development, and design capability for the use of an advanced, high-rate anaerobic reactor for agroindustrial waste-pollution abatement and energy recovery. \$78 202 — 6 months.

87-0029 Doctoral program: CIRES (West Africa) — Phase III

To strengthen the Centre ivoirien de recherches économiques et sociales (CIRES), Abidjan, by providing it with six scholarships in rural economics at the doctoral level for the 1987-1988 university year. \$124 400 — 12 months.

87-0056 The Hague Academy of International Law scholarships (Global)

For The Hague Academy of International Law, the Netherlands, to assist in training young legal scholars from developing countries in aspects of international law and to support the Academy's training program for legal practitioners and researchers from the Third World. \$25 733 — 12 months.

87-0062 Training course on fish reproduction (Brazil) — Phase II

For the Centro de Pesquisa e Treinamento em Aquicultura, São Paulo, to upgrade local research capability in freshwater-fish aquaculture by providing practical and theoretical training in fish reproduction, induced spawning, and larvae rearing in support of ongoing aquaculture research activities in Centre-sponsored fisheries projects in Latin America and the Caribbean. \$61 875 — 6 months.

87-0064 Training course on insect pest management (sub-Saharan Africa) — Phase II

For the International Centre of Insect Physiology and Ecology, Kenya, to hold a training course to establish a practical foundation for pest and vector management and an exchange of experience in handling this problem. \$67 920 — 6 months.

87-0065 Research methods focusing on gender issues (sub-Saharan Africa) — Phase II

For the Eastern and Southern African Management Institute, Tanzania, to conduct a training workshop to strengthen its women-in-development program and those in other institutions of the region by producing training manuals that integrate gender issues. \$69 900 — 6 months.

87-0066 Microcomputers in health research and data analysis (sub-Saharan Africa)

For the Kenya Medical Research Institute, Nairobi, to upgrade its staff's skills in conducting research projects more efficiently. \$80 456 — 6 months.

87-0067 Research methods focusing on urban issues (sub-Saharan Africa)

For the Ardhi Institute, Tanzania, to hold a training course for 25 participants with a view to developing common research priorities in urban studies, upgrading the research skills of urban studies scientists, and developing active research proposals for funding by donor agencies including IDRC. \$68 420 — 6 months.

87-0068 Forestry research-methods course (East Africa) — Phase II

For the University of Dar es Salaam, Tanzania, to enable the Faculty of Agriculture, Forestry, and

Veterinary Science to conduct a course to enhance the research skills of forestry scientists in the region. \$86 465 — 6 months.

87-0072 WID awards*

For the Social Sciences Division, IDRC, to provide support from the Centre's Women in Development (WID) program for individual training awards to increase the capability of researchers and institutions in developing countries to undertake WID-related research. \$107 730 — 18 months.

87-0141 Applied economics on tropical roots network (Latin America)

For the Universidad de Costa Rica to enable the Asociación Costarricense de Raíces Tropicales to provide agronomists and other biology-oriented professionals and technicians with the analytical tools needed to enable them to include basic economic indicators in the analysis of their research and to recommend technological alternatives. \$18 190 — 6 months.

87-0147 Strengthening Latin American development thinking and teaching

For the Corporación de Investigaciones para el Desarrollo, Chile, to develop a set of 10 instructional packages to be used as teaching materials in economic-development courses. \$84 430 — 18 months.

87-0156 Farm classification techniques (Latin America)

To enable the Universidad de San Carlos, Guatemala, to provide researchers involved in the application of statistical techniques for small-farm classification with the basic analytical tools to develop appropriate methodologies, with a view to improving the design and dissemination of production alternatives for small-scale farmers. \$42 000 — 6 months.

87-0163 Symposium on higher education (Dominican Republic)

For the Asociación Dominicana de Rectores de Universidades, Santo Domingo, to hold a symposium on higher learning that will enable policymakers and university administrators to establish an ongoing process of critical analysis and reflection about the direction of higher education in the country. \$59 876 — 24 months.

87-0164 Senior fellowship for Dr José Joaquín Brunner (Latin America)

For the Fellowships and Awards Division, IRDC, to enable Dr Brunner to spend 12 months at IDRC and several Canadian universities conducting research on questions related to the development, maintenance, and expansion of scientific communities in Latin America. \$65 270 — 12 months.

87-0175 Insect identification and biosystematic services for agriculture (sub-Saharan Africa) — Phase II

For the National Museums of Kenya, Nairobi, to provide training courses that will enable graduate

entomologists to collect, prepare, and identify specimens of agricultural insect pests and their predators; to introduce the scientists to the scientific basis of insect biosystematics and identification; and to strengthen the National Museums of Kenya in providing biosystematic services to the region. \$30 060 — 6 months.

87-0196 International Foundation for Science (Global)

For the International Foundation for Science, Sweden, to provide support for about 10 young scientists from the Third World to undertake research in scientific areas of priority to their countries. \$125 000 — 12 months.

87-0218 An approach to development of human resources (West and Central Africa and the Maghreb)

For the Université de Yaoundé, Cameroon, to enhance the ability of 30 African specialists to analyze the region's training and human resources-development needs and to define a set of projects to meet these needs. \$86 170 — 6 months.

87-0270 Postgraduate education (eastern and southern Africa)*

For the Fellowships and Awards Division, IDRC, to encourage and strengthen graduate education in universities in eastern and southern Africa by emphasizing its importance as the primary source of trained researchers and high-level human resources. \$500 000 — 36 months.

87-0324 EDPUB national-level training (Asia)*

For Sukhothai Thammathrist Open University, Thailand, to foster the development of effective editing and publishing procedures at the national level in South and Southeast Asia by beginning the process of transferring the IDRC-International Rice Research Institute regional training course in editing and publishing (EDPUB) for adaptation and use by local institutions. \$50 750 — 18 months.

87-0327 Master's degree program: fisheries diseases and diagnosis (Malaysia)*

For the Universiti Pertanian Malaysia, Serdang, to enable the Faculty of Fisheries and Marine Sciences to establish a master's-level program in fisheries diseases and diagnostic theory and research methods. \$149 420 — 48 months.

87-0335 Curriculum-development training (the Philippines)*

For the Southeast Asian Fisheries Development Center, Thailand, to enable its Aquaculture Department in the Philippines to fund a workshop to help staff develop more useful pedagogical strategies in designing and delivering short-term courses. \$32 000 — 6 months.

87-0336 Training of human resources in CDS-MICROISIS (Global)*

For the Fellowships and Awards Division, IDRC, to train technicians in IDRC-funded projects in software

management for CDS-MICROISIS and to train a selected group of technicians to act as resource persons and instructors in future training activities. \$36340 — 18 months.

87-0343 DAWN research training workshop (Brazil)*

For the Instituto Universitario de Pesquisas, Rio de Janeiro, to enable the Development Alternatives with Women for a New Era (DAWN) to develop a graduate training and research program to be institutionalized as a regular graduate program. \$83668 — 18 months.

87-1001 Young Canadian researchers (Global)

For Fellowships and Awards Division, IDRC, to contribute to the growth of research capacity in Canada that is responsive to Third World priorities by supporting Canadians at various stages of their academic and professional careers in research or training undertaken in a Third World country. \$550000 — 12 months.

87-1002 Health exchange program (Global) — Phase IV

For the Canadian Society for Tropical Medicine and International Health, Ontario, to enable Canadian health personnel to serve attachments in developing country institutions and, thereby, increase personnel resources for international health in Canada and in Canadian-sponsored activities. \$250000 — 12 months.

87-1015 Summer institute on gender and development (Canada)

For Saint Mary's University, Halifax, in collaboration with Dalhousie University, Halifax, to assist students to identify research questions, examine methodological debates and advances, and analyze the existing literature on women and development with the goal of upgrading the capability of students to conduct/supervise high-quality social science research on women and/or gender relations. \$60000 — 24 months.

Health Sciences

87-0004 Polyvinyl chloride (PVC) handpumps (China)*

For the Ministry of Machine Building Industry, Beijing, to enable the Chinese Academy of Agricultural Mechanization Sciences to adapt the IDRC-University of Malaysia PVC handpump for use in China with a view to assessing the possibility for large-scale manufacture and installation in the country. \$249880 — 24 months.

87-0033 Women in community development (Asia)

To enable the Institute of Southeast Asian Studies, Singapore, and six institutions in Southeast Asia and the Pacific, to plan, implement, and evaluate a program of participatory research for community-

health development involving rural women in various settings in Asia and the Pacific. \$317156 — 36 months.

87-0037 Health management of the urban poor in four Asian cities

For the Institute of Southeast Asian Studies, Singapore, to develop viable operational plans to meet the health needs of the urban poor in selected cities in the ASEAN (Association of South East Asian Nations) region. \$230250 — 24 months.

87-0043 Hepatitis B (Saint Christopher and Nevis)

For the Caribbean Epidemiology Centre, Trinidad and Tobago, to evaluate the immune response in infants and children of two hepatitis B vaccines in terms of maximal conversion for lowest dosage or cheapest cost or both. \$259965 — 24 months.

87-0044 Training in priority health problems in medical education (Global) — Phase II

For McMaster University, Canada, to enable its Faculty of Health Sciences to allow four fellows to participate in the "Priority Health Problems in Medical Education" project of the network of Community-oriented Educational Institutions for Health Sciences. \$45000 — 12 months.

87-0046 Epidemiology of diarrheal disease (Indonesia)*

For Universitas Andalas, Padang, to investigate the epidemiology of diarrheal diseases in the rural area of Kecamatan Kuranji in West Sumatra. \$163700 — 24 months.

87-0060 FRCSS manual (the Philippines)

For the Kabalikang Pamilyang Pilipino, Metro Manila, to promote the acceptability and proper use of ferrocement rainwater catchment systems (FRCSS). \$25490 — 28 months.

87-0061 Helminthiasis control (Sri Lanka)

For the University of Ruhuna, Galle, to enable its Faculty of Medicine to study the severity and prevalence of soil-transmitted helminths in rural communities in southern Sri Lanka with a view to improving the well-being of the community. \$40020 — 36 months.

87-0073 Diet and changing lifestyle (Mauritius)

For the Ministry of Health, Port Louis, to characterize the prevailing diet and lifestyle of Mauritian youth, with specific attention to subgroups of particular interest. \$28965 — 12 months.

87-0080 Community participation in health development (Ghana)

For the University of Ghana, Accra, to permit its Medical School to identify the extent to which rural populations are actively involved in health-related decision-making, health-resources development, and specific activities aimed at health promotion and protection and disease prevention. \$15183 — 16 months.

87-0081 Waterlines (Global) — Phase II

For the Intermediate Technology Publications Limited, U.K., to support the marketing and promotion activities of *Waterlines*, to ensure that it continues to be a vehicle for information dissemination to the end of the International Drinking Water Supply and Sanitation Decade. \$95 000 — 36 months.

87-0084 Water-pumping technology (Malaysia) — Phase III

For the Universiti Malaya, Kuala Lumpur, to establish a regional centre for research and development in handpump technology; to use this centre of expertise for on-the-job training in the manufacture, assembly, installation, and maintenance of the UNIMADE handpump; and to establish a network of manufacturing units (large- and small-scale) within the region and elsewhere. \$1 129 040 — 36 months.

87-0085 Wells and handpump testing (Kenya)

For the Kenya Medical Research Institute, Nairobi, to install, field-test, and evaluate 50 UNIMADE Mark III handpumps on wells of various designs and construction (traditional hand-dug and tube wells); and to compare water quality and pump performance in relation to well type and construction techniques. \$200 090 — 24 months.

87-0086 Human pathogen survival (Zaire)

For the Comité de développement socio-économique des Baha'is du Haut Zaïre, Kisangani, to enable the Département de microbiologie of the Université de Kisangani to study the survival of excreted pathogens in stored excreta and in the subsoil to determine the appropriate design and operation (optimum pit volume and emptying frequency) of pit latrines that will minimize the risks associated with groundwater pollution and handling pit contents. \$98 690 — 24 months.

87-0091 Socioeconomic study of the Ethiopian Water Works Construction Authority's handpump project*

For the University of Addis Ababa to enable the Institute of Development Research to undertake a comprehensive socioeconomic study of the IDRC-funded project "Pumping Technology Research (Ethiopia) — Phase II," with particular reference to the involvement of community members in the planning, implementation, and maintenance of the handpump program, the reaction of community members to the technology, and the impact of the program on daily life. \$105 000 — 30 months.

87-0092 Women in handpump technology (Sri Lanka) — Phase II

For the Sarvodaya Economic Enterprises Development Services, Ratmalana, to replicate the strategies identified in the recently completed "Women in Handpump Technology" project for expansion to other dry-zone districts in Sri Lanka, and develop a low-cost well-drilling rig to

complement the Sarvodaya handpump program. \$370 140 — 36 months.

87-0100 Infant and child mortality (Nigeria)

For the University of Ibadan to identify and explore the interactive relationships between environmental and maternal factors and child mortality and health in two different ecological zones in southwestern Nigeria. \$36 240 — 12 months.

87-0103 Excreta disposal (Bolivia)

For the Proyecto Sucre-Ciudad Universitaria, Sucre, to improve sanitary conditions in low-income areas of Sucre through introduction of reliable and acceptable latrine technologies and a simple hygiene-education program. \$83 700 — 24 months.

87-0105 Soil-transmitted helminths (Indonesia) — Phase II

For Gadjah Mada University, Jogjakarta, to enable its Department of Parasitology to demonstrate that a community-managed water supply and sanitation improvement program with a supporting health-education program is an effective means of reducing the prevalence of water-related diseases on a long-term and sustained basis. \$54 300 — 30 months.

87-0111 Liver-fluke infections (Thailand) — Phase II*

For Mahidol University, Bangkok, to maintain the control of liver-fluke infection through a nutrition and health education-cum-treatment program. \$176 400 — 36 months.

87-0122 Diagnosis of dengue (Malaysia)*

For the Universiti Sains Malaysia, Penang, to reduce the cost of patient management and hospital-bed utilization during outbreaks of dengue fever by predicting which patients are at risk of developing severe hemorrhagic manifestations and hypovolemic shock. \$135 870 — 36 months.

87-0124 Typhoid porins (Chile)

For the Pontificia Universidad Católica de Chile, Santiago, to evaluate the antibody response to *Salmonella typhi* porins as a diagnostic procedure for typhoid fever, characterizing its sensitivity, specificity, and predictive value in acute-stage patients and also to determine whether it is present in chronic carriers and vaccinated subjects. \$179 290 — 24 months.

87-0126 Filariasis (Dominican Republic)*

For the Centro de Investigaciones Biológicas y Adiestramiento, Santo Domingo, to determine the epidemiological characteristics in the transmission of filariasis due to *Wuchereria bancrofti* in Cabral, Barahona Province. \$121 850 — 24 months.

87-0137 Leishmaniasis (Ethiopia)*

For the University of Addis Ababa to enable the Institute of Pathobiology to determine the extent of visceral leishmaniasis and its socioeconomic implications in agricultural and resettlement areas in southwestern Ethiopia with a view to recommending

feasible intervention strategies. \$216085 — 36 months.

87-0138 Neurocysticercosis (Peru)

For the Universidad Peruana Cayetano Heredia, Lima, to develop a rapid serological method for use in the diagnosis, treatment, and epidemiology of neurocysticercosis. \$161140 — 18 months.

87-0153 Community self-reliance (Thailand)

For Chulalongkorn University, Bangkok, to enable its Faculty of Engineering to develop the capacity of communities to choose, plan, construct, and manage a water and sanitation program according to their resources and skills. \$52480 — 18 months.

87-0154 AIDS diagnosis (Global)

For the Program for Appropriate Technology in Health, USA, to develop a rapid and simple test for the detection of antibodies to the human immunodeficiency family of viruses, the etiological agents of acquired immunodeficiency syndrome (AIDS). \$47260 — 12 months.

87-0155 Occupational health in the metal industry (Mexico)

For the Universidad Autónoma Metropolitana-Xochimilco, Mexico City, to validate the participatory and educational methodology to study working conditions in relation to workers' health that was developed in the first phase of this research program. \$90760 — 18 months.

87-0158 "Open mole" (Liberia)

For Cuttington University College, Monrovia, to study traditional knowledge, attitudes, and practices regarding "open mole" — sunken fontanel caused by dehydration resulting from severe diarrhea or vomiting, or both — with a view to developing an educational package for use by the Ministry of Health. \$38860 — 16 months.

87-0171 Organization and management in primary health care (Zambia)

For the University of Zambia, Lusaka, to explore the extent to which mechanisms exist to promote teamwork among primary health-care professionals, and with other sectors as well as within communities. \$16750 — 12 months.

87-0172 Evaluation of PK nurses (Indonesia)*

For the Ministry of Health, Jakarta, to enable the Centre for Education of Health Manpower to evaluate the performance of graduates from the Primary Health Nurse/Perawat Kesehatan (PK) program, with particular reference to their functions as defined by the standards of service delivered, job satisfaction, and factors that may affect the delivery of their program. \$213170 — 24 months.

87-0173 Pollution load in the Msimbazi Stream (Tanzania)*

For the University of Dar es Salaam to enable its Faculty of Engineering to assess the nature and degree of pollution in the Msimbazi Stream, with

particular reference to industrial and domestic wastes. \$71760 — 18 months.

87-0187 Hepatitis B vaccine in schoolchildren (Egypt)*

For Suez Canal University, Ismailia, to study and compare the kinetics of antibody response to hepatitis B virus recombinant yeast vaccine in schistosomiasis-infected and uninfected subjects. \$85725 — 24 months.

87-0192 Growth faltering (Malawi)*

For the University of Malawi, Zomba, to enable the Centre for Social Research to study the complex nature of undernutrition in Malawi, focusing on the patterns of seasonal variation in the growth and well-being of children and their parents. \$231660 — 30 months.

87-0198 Epidemiology of dengue (Malaysia) — Phase II*

For the Universiti Malaya, Kuala Lumpur, to carry out basic epidemiological and serological studies to monitor the activity of the dengue virus in regions where it is endemic and to determine the risk factors contributing to dengue hemorrhagic fever. \$100550 — 36 months.

87-0200 Training in health management (Canada) — Phase III

For the University of Toronto to enable its Faculty of Medicine to provide fellowship support for 24 trainees to participate in the University's course in Health Care Evaluation and Management Skills. \$396450 — 36 months.

87-0204 Bilharzia (Egypt) — Phase IV*

For the University of Alexandria to enable the High Institute of Public Health and the Medical Research Institute to assess the effectiveness of *Ambrosia maritima* for sustained control of schistosomiasis in an established and newly reclaimed area of Egypt. \$356080 — 36 months.

87-0211 Tuberculosis annual risk (Botswana)*

For the Ministry of Health, Gaborone, to enable the Epidemiology Unit to estimate the annual risk of tuberculosis infection among school entrants. \$71740 — 12 months.

87-0212 Socioeconomic determinants of infant mortality in Rosario (Argentina) — Phase II

For the Administración Médica de Rosario to enable its Centro de Estudios Sanitarios y Sociales to compare the relative impact of behavioural, socioeconomic, and institutional factors on infant health during the 1st year of life so as to propose a strategy to improve maternal child-care programs. \$37000 — 12 months.

87-0221 Malaria field incubator (the Philippines-Global)*

For the World Health Organization's (WHO) Regional Office for the Western Pacific, Manila, to enable the Malaria Control Service of the Ministry of

Health to produce and distribute (within 1 year and at cost) to developing country researchers 100 WHO field incubators designed specifically for the WHO standard in-vitro microtest for monitoring response of *Plasmodium falciparum* to antimalarial drugs. \$50 270 — 12 months.

87-0231 Ethno-medicine and health care (Kenya)*

For Kenyatta University College, Nairobi, to enable its Department of Geography to develop policy recommendations on the role of traditional health practitioners in rural health-care delivery for use in planning and implementing improved primary health-care strategies. \$76 740 — 24 months.

87-0232 Psychosocial support and pregnancy outcomes (Latin America)*

For the Centro Rosarino de Estudios Perinatales, Argentina; the Universidade Católica do Pelotas, Brazil; the Ministerio de Salud Pública, Cuba; and the Instituto Nacional de Salud Pública, Mexico, to establish a network of Latin American biomedical and social scientists to study the impact of psychosocial interventions on pregnancy outcomes. \$953 133 — 24 months.

87-0238 Evaluation of health services in a refugee-affected area (Sudan)*

For the Office of the Commissioner for Refugees, Khartoum, to enable the Office and the Department of Community Medicine in the Faculty of Medicine, University of Khartoum, to carry out a comparative analysis of the performance and operation of the health-care delivery system in a refugee-affected area of the Eastern Region and one located in an area that has not experienced an influx of refugees. \$154 295 — 14 months.

87-0239 Active surveillance of TB in remote communities (Mexico)*

For the Universidad Autónoma de Guerrero to enable the Centre for Tropical Disease Research to investigate the feasibility of tuberculosis (TB) surveillance using inexpensive portable microscopes in remote communities. \$28 690 — 24 months.

87-0241 Mining sector (Bolivia)*

For the Comité Ejecutivo de la Universidad Católica Boliviana, La Paz, to analyze the health-disease process in the tin-mining sector using a representative cooperative and a state mine in the department of Potosí, and to establish what determines this process in the miners and their families. \$147 444 — 24 months.

87-0243 Endemic goitre (Ecuador)*

For the Fundación Ciencia para el Estudio del Hombre y la Naturaleza, Quito, to determine the prevalence and etiology of goitre on the coast of Ecuador. \$147 990 — 24 months.

87-0244 Maternal and perinatal mortality (Indonesia)*

For the Coordinating Board of Indonesian Fertility Research, Bandung, to determine the incidence,

etiology, and risk factors of maternal and perinatal mortality with a view to improving maternal and child health and family-planning services in Central Java Province. \$145 320 — 18 months.

87-0245 Evaluation of administration and management of health services (Egypt)

For the Palestine Red Crescent Society, Heliopolis, to evaluate its administrative and management structure and process with respect to the policy-making, planning, and programming for the health and social service needs of the communities it serves. \$232 210 — 15 months.

87-0249 Hepatitis B immunization (China)*

For the Program for Appropriate Technology in Health, Canada, to establish a research project in Long An county to determine how best to integrate hepatitis B vaccination into China's Expanded Program on Immunization. \$334 525 — 48 months.

87-0250 Immunization coverage (Thailand)*

For Khon Kaen University, Muang Khon Kaen, to enable its Faculty of Medicine to carry out a research study to assess the effectiveness and performance of the Expanded Program on Immunization. \$56 210 — 18 months.

87-0252 Diabetes and hypertension in women (Trinidad and Tobago)*

For Researchers for Education, Action, and Development, Port-of-Spain, to investigate the etiology and management of diabetes mellitus and hypertension, two major causes of death and disability in women in Trinidad and Tobago. \$84 760 — 12 months.

87-0260 Acute respiratory infections (China)*

For the Capital Institute of Pediatrics, Beijing, to develop, implement, and evaluate a comprehensive health-care package for children aimed at reducing morbidity and mortality from acute lower-respiratory infection. \$135 540 — 36 months.

87-0264 Containers for primary health care (Global) — Phase II*

For the Program for Appropriate Technology in Health, USA, to complete the development of an appropriate portable container system for primary health care to be used to transport medical supplies and equipment by primary health-care workers. \$284 690 — 18 months.

87-0269 Small grants program on health services research (Africa)*

For the World Health Organization's Regional Office for Africa, Congo, to promote the development of research on social, economic, and behavioural determinants of health and on management methods that can improve health services coverage, equity, efficiency, and impact. \$328 580 — 24 months.

87-0271 Yellow fever vaccine (Nigeria)*

For the Ministry of Health, Lagos, to enable the Federal Vaccine Production Laboratories to

modernize and strengthen yellow fever-vaccine laboratory facilities at Yaba, Lagos, to promote good manufacturing practices in all steps of production and quality control and to ensure their compliance with the World Health Organization's requirements; and to up-grade vaccine production qualitatively and quantitatively using thermostable formulation. \$256 530 — 36 months.

87-0272 Rehabilitation (Jamaica)

For the Caribbean Regional Office of Disabled Peoples' International, Kingston, to develop a data base for Jamaica and a methodology for disability surveys that can be applied in other Caribbean countries on the nature and prevalence of physical disability and the knowledge and attitudes of society toward physical disability and the disabled. \$83 450 — 18 months.

87-0274 Perinatal mortality (Jamaica) — Phase II*

For the University of the West Indies, Kingston, to continue to develop a knowledge base from which to improve maternal and child-care services, thereby reducing perinatal morbidity and mortality. \$239 700 — 12 months.

87-0281 Tropical diseases research (Global) — Phase VII*

For the World Health Organization, Switzerland, to develop new tools for the prevention, diagnosis, and treatment of the most prevalent tropical diseases and to strengthen the research capabilities of developing countries by providing training in biomedical sciences and various forms of institutional support. \$400 000 — 24 months.

87-0286 DAFF latrine (Guatemala) — Phase II*

For the Centro de Estudios Mesoamericano sobre Tecnología Apropriada, Guatemala City, to evaluate and provide advice on technical aspects and social acceptance of dry alkaline family fertilizer (DAFF) latrines. \$215 300 — 36 months.

87-0287 Pesticide poisoning (Jordan)*

For Birzeit University, West Bank, to reduce the occupational hazard to farmers and their families posed by the use of organophosphate pesticides. \$48 770 — 12 months.

87-0292 Cadmium and arsenic intoxication of children (Mexico)*

For the Universidad Autónoma de San Luis Potosí to assess the magnitude of environmental contamination by arsenic and cadmium in a residential zone adjacent to copper and zinc smelters in San Luis Potosí, and to examine the degree to which the health of the population may have been affected by exposure to these toxic metals. \$78 680 — 24 months.

87-0293 Vitamin A deficiency (Tanzania)*

For the Tanzania Food and Nutrition Centre, Dar es Salaam, to assess the extent and severity of vitamin A deficiency among children in a drought-prone area of the country. \$57 490 — 12 months.

87-0304 Hepatitis B vaccine in schistosomiasis (Egypt)*

For University of Cairo to enable the Department of Tropical Medicine (Immunology) to evaluate the effectiveness (immunogenicity) of vaccination against hepatitis B virus (HBV) schistosomiasis-infected individuals, so that appropriate preventive strategies for hepatopathy can be developed. \$127 000 — 36 months.

87-0305 Training in priority health problems in medical education (Global) — Phase III*

For McMaster University, Canada, to enable the Faculty of Health Sciences to assist educational institutions for health sciences to train health professionals in the knowledge, skills, and attitudes needed to address community health needs. \$77 960 — 12 months.

87-0306 Mother's education and child health (South Korea)*

For the Population Association of Korea, Seoul, to gain new insights into the relationship between a mother's education and behaviour and her child's health. \$80 664 — 24 months.

87-0308 Epidemiology of hepatitis B (Mozambique)*

For the Ministerio da Saude, Maputo, to enable the Instituto Nacional de Saude to assess the epidemiological pattern of infection with hepatitis B virus (HBV) in children and their mothers in the city of Maputo and to evaluate an HBV-immunization schedule appropriate to the country's conditions. \$193 682 — 30 months.

87-0309 AIDS health education (Uganda)*

For the Ministry of Local Government, Kampala, to enable the Nsamizi Training Institute of Social Development to understand people's knowledge, attitudes, and practices concerning acquired immunodeficiency syndrome (AIDS) and to use the results to plan a public education program. \$33 395 — 12 months.

87-0318 Hookworm (Indonesia)*

For Udayana State University, Denpasar, to determine the prevalence pattern of hookworm infestation in relation to anemia in the Province of Bali to permit a feasible strategy for prevention and control to be planned. \$68 500 — 24 months.

87-0323 Diarrheal disease (Uruguay)*

For the Universidad de la República, Montevideo, to enable the Departamento de Bacteriología y Virología of the Instituto de Higiene to characterize acute diarrheal disease in disadvantaged children under 18 months of age, to identify factors that may influence its duration and effect, and to propose ways of improving management of the disease. \$52 380 — 24 months.

87-1039 Groundwater pollution (Tanzania)

For the Centre for Housing Studies of the Ardhi Institute, Dar es Salaam, to investigate the

contamination of groundwater and of water supplied by municipal water mains in areas where on-site waste-disposal systems are used, so as to develop guidelines for the siting of these facilities. \$179 704 — 24 months.

87-1041 Institution development and infant nutrition research (China-Canada)*

For Sun Yat-Sen University of Medical Sciences, Guangzhou, and the University of Toronto, Ontario, to assist the departments of Clinical Nutrition and of Pediatric Nutrition of Sun Yat-Sen University of Medical Sciences to become self-sufficient in the field of community nutrition and nutrition research. \$478 950 — 60 months.

87-1045 Enhancement of jeevanstar in rural Surkhet (Nepal-Canada)*

For Tribhuvan University, Kathmandu, and the University of Calgary, Alberta, to gather information on basic human needs, including health and quality of life, from community residents in the Surkhet District. \$626 052 — 24 months.

Information Sciences

87-0009 International Buffalo Information Center (Global) — Phase II

For Kasetsart University, Thailand, to enable the Department of Animal Science and Main Library to ensure that the services and products (output) of the International Buffalo Information Center (IBIC) are made available to the target users and that the scientific community contributes to the IBIC system. \$80 160 — 24 months.

87-0010 Communication for development: Asia Pacific Information Network

For the Asian Mass Communication Research and Information Centre, Singapore, to improve and extend its capacity to collect, repackaging, and disseminate information on communication and its use for development within the region. \$303 000 — 36 months.

87-0012 Information and documentation service of the Central African Chambers of Commerce

For the Fédération des chambres de commerce de l'Afrique centrale, Congo, to strengthen its information and documentation service so that it can collect, process, and disseminate up-to-date information to favour the growth of subregional commercial exchanges and better knowledge of existing opportunities. \$248 850 — 36 months.

87-0042 Atlas of Ethiopia — Phase II

For the Ethiopian Mapping Agency, Addis Ababa, to publish a multicoloured national atlas of Ethiopia and to distribute it to local and international users. \$91 510 — 12 months.

87-0047 Pan American Network on Information and Documentation in Sanitary Engineering and Environmental Sciences: REPIDISCA

For the Pan American Health Organization, USA, to enable the Instituto Nicaraguense de Acueductos y Alcantarillados to establish an information service on sanitary engineering and water management in support of national development. \$43 945 — 24 months.

87-0049 Information services on urbanization (Uruguay)

For the Centro de Informaciones y Estudios del Uruguay, Montevideo, to establish a national bibliographical service on urbanization. \$59 845 — 24 months.

87-0052 Support and improvement for agricultural documentation (Mauritania) — Phase II

For the Société nationale pour le développement rural, Nouakchott, to enable it to attain the level of the documentation institutions in neighbouring countries, and thus fulfill its mandate as a national centre for agricultural documentation and rural development. \$93 715 — 24 months.

87-0055 Computer communications experimentation and training (Asia)

For the Asia Monitor Resource Centre, Hong Kong, to assist, promote, and facilitate the development of appropriate computer-communications techniques in Asia by action-oriented organizations concerned with grass-roots development. \$78 686 — 24 months.

87-0058 Information for rural and urban development (Chile)

For the Centro de Estudios en Tecnologías Aplicadas para América Latina (CETAL), Valparaíso, to establish in CETAL an information service on appropriate technology. \$57 662 — 24 months.

87-0059 Modern management of information systems (Sahel)

For the Institut du Sahel, Mali, to enable the Réseau sahélien d'information et de documentation scientifiques et techniques to organize a seminar to train 17 information specialists in the theoretical and practical aspects of setting up and managing information systems using new technologies. \$90 167 — 6 months.

87-0083 Thai Agricultural Colleges Transfer of Information Cooperative Service: TACTICS

For the Ministry of Education, Bangkok, to enable the Lamphun Agricultural College to upgrade and strengthen the capacity of the agricultural education system to provide information to the teachers, students, and farmers in its agricultural colleges. \$129 000 — 36 months.

87-0089 Public administration information (Latin America) — Phase III

For the Centro Latinoamericano de Administración para el Desarrollo (CLAD), Venezuela, to support government agencies, the academic community, and other units in Latin America and the Caribbean and in Spain by means of a computerized information system based on a Latin American network coordinated by the CLAD Documentation Centre. \$310 000 — 36 months.

87-0090 National information system (Sudan)

For the National Council for Research, Khartoum, to enable its National Documentation Centre to automate its information services and to build a national bibliographic data base for scientific, technological, and socioeconomic information. \$91 700 — 36 months.

87-0093 Asian and Pacific Skill Development Information Network: APSDIN

For the Asian and Pacific Skill Development Programme of the International Labour Office, Pakistan, to establish and strengthen five national vocational-training documentation centres in South and Southeast Asia. \$198 600 — 24 months.

87-0094 African Information Network on Skill Development: AINS D

For the Centre interafricain pour le développement de la formation professionnelle (CIADFOR) of the Bureau international du travail, Côte d'Ivoire, to develop an information system based on information units specialized in the training of country members of CIADFOR. \$203 500 — 36 months.

87-0095 Fisheries management information system (Trinidad and Tobago)*

For the Ministry of Food Production, Marine Exploitation, Forestry and the Environment, Port-of-Spain, to enhance its capacity to handle various types of data necessary for marine fishery-resource management through the establishment of a Fisheries Management Information System (FIMIS). \$229 625 — 36 months.

87-0096 Water and sanitation information network (Indonesia)

For the Ministry of Public Works, Jakarta, to enable the Directorate General of Human Settlements to lay the groundwork for establishing a national water-supply and sanitation documentation and information network. \$306 225 — 36 months.

87-0097 African Documentation and Information System on Major Endemic Diseases: ADISMED

For the Organisation de coordination et de coopération pour la lutte contre les grandes endémies (OCCGE), Burkina Faso, to develop and reinforce the documentary structures of OCCGE and to start an interregional network of documentation on major endemic diseases. \$282 225 — 24 months.

87-0098 National documentation centre on public health (Chad)

For the ministère de la Santé publique, N'Djamena, to establish an information and documentation centre on public health through the structure of a national documentation centre on public health. \$175 800 — 24 months.

87-0101 Regional Information Network on Arab Women: preliminary phase

For the American University in Cairo, Egypt, to enable the Social Research Centre to select and approve an appropriate structure or design that would ensure the proper functioning of the Regional Information Network on Arab Women (RINAW). \$90 500 — 18 months.

87-0102 National languages (Benin)

For the Centre nationale de linguistique appliquée, Cotonou, to advance linguistic research with a view to helping the government formulate a policy concerning the official use of national languages. \$80 000 — 24 months.

87-0106 MINISIS Resource Centre (China)

For the Scien-Tech Information Centre, Beijing, to establish a MINISIS Resource Centre in Beijing at an institution with experience in the use of MINISIS especially in library and documentation centre applications. \$112 600 — 24 months.

87-0107 Study Network of Production Systems in West Africa: SNPSWA

For Semi-Arid Food Grain Research and Development Project, Burkina Faso, to enable the West African Farming Systems Research Network to establish an information and documentation system within the coordinating body of SNPSWA. \$203 265 — 24 months.

87-0108 CEHANET (Global)

For the World Health Organization (WHO), Egypt, to enable the regional Centre for Environmental Health Activities (CEHA) to establish a water and sanitation information network (CEHANET) in the eastern Mediterranean region covered by WHO and coordinated by CEHA. \$252 000 — 24 months.

87-0116 Arab Information System on Geology and Mining: AISGM

For the Organisation arabe des ressources minières, Morocco, to establish an Arab network of geological and mining information that will allow it to record and process published and unpublished literature in the field so as to disseminate it efficiently to its users. \$166 415 — 36 months.

87-0117 Information services: Industrial Development Board (Sri Lanka)*

For the Industrial Development Board, Moratuwa, to expand and upgrade its technological information services by developing access to other sources of information and introducing new methods of information dissemination. \$176 715 — 36 months.

87-0127 Bamboo information centre (China)

For the Chinese Academy of Forestry, Beijing, to establish a bamboo information centre. \$154 300 — 36 months.

87-0146 Banana and plantain information network: preliminary phase (Global)

For the International Network for the Improvement of Banana and Plantain (INIBAP), France, to set up an information system to support the needs of users of INIBAP. \$469 000 — 24 months.

87-0157 National data base and data network utilization (Mexico)

For the Instituto Latinoamericano de Estudios Transnacionales, Mexico City, to study and demonstrate how national data-base development and utilization can be improved through cooperative effort and computer-based networking and to carry out experiments with the Mexican national packet-switching network to demonstrate its utility and to promote its utilization. \$41 789 — 18 months.

87-0167 Remote sensing for artisanal fishing of tuna and swordfish (Chile)

For the Universidad Católica de Valparaíso to enable the Escuela de Ciencias del Mar to define a functional methodology for using sea surface-temperature maps that integrate primary production information to assist artisanal fishermen in locating tuna and swordfish. \$71 330 — 24 months.

87-0184 SFIS project analysis and document delivery (Global) — Phase II

For the International Center for Living Aquatic Resources Management, the Philippines, to continue to provide through the Selective Fisheries Information Service (SFIS) the following fisheries information services: a current awareness service, a question-and-answer service, computerized literature searches, a document delivery service, critical evaluations of scientific literature, publication of minireviews, and promotion of the use of other information services and sources in the same field. \$147 600 — 24 months.

87-0189 MINISIS Resource Centre (Maghreb)*

For the Arab League Documentation Centre, Tunisia, by establishing a MINISIS Resource Centre, to enable current and new users of the on-line data-base management system for bibliographic and similar applications to have more efficient access to support services provided in Arabic. \$200 000 — 36 months.

87-0193 National economic and commercial information network (Algeria)*

For the Centre national d'information et de documentation économiques, Algiers, to consolidate and streamline the whole economic information system at the national level to increase its efficiency, to diversify and extend its services, and to initiate decentralization at the regional level. \$95 000 — 18 months.

87-0194 SATIS information systems (Global)

For Socially Appropriate Technology Information Services (SATIS), the Netherlands, to develop a classification system, a thesaurus, a training resource guide, and an inventory of training resources and opportunities. \$268 900 — 36 months.

87-0195 In-shore fisheries information system (Chile)*

For the Ministerio de Economía, Santiago, to enable the Instituto de Fomento Pesquero to assist the Subsecretaría de Pesca in the rational management and development of in-shore fisheries resources by developing and field-testing a prototype fisheries-management information system. \$119 680 — 24 months.

87-0203 Refugee thesaurus (Global)

For the United Nations High Commissioner for Refugees, Switzerland, to produce a multilingual thesaurus on refugees, to be used both within the organization (field and headquarters) and by members in the emerging international refugee documentation network. \$93 300 — 18 months.

87-0214 CLACSO regional social sciences information network (Latin America)*

For the Consejo Latinoamericano de Ciencias Sociales (CLACSO), Argentina, to improve social sciences research in CLACSO in particular and in the region in general, by providing appropriate and effective information services. \$97 000 — 24 months.

87-0217 National Information System for Science and Technology: SINICYT (Costa Rica)

For the Consejo Nacional de Investigaciones Científicas y Tecnológicas, San José, to improve the ability of the Ministerio de Ciencias y Tecnología to coordinate, plan, and implement scientific and technological research policies in response to national needs and priorities as outlined in the National Development Plan. \$88 600 — 24 months.

87-0228 Packet-radio experimentation (Lesotho)*

For the Lesotho Telecommunications Corporation, Maseru, to test and evaluate the use and applicability of packet-radio techniques to rural information dissemination and communications needs. \$149 000 — 24 months.

87-0247 Diploma in library and information studies (South Pacific)*

For the University of the South Pacific, Fiji, to establish a library training program at the undergraduate diploma level for the countries of the region and to conduct regional and national workshops on topics identified as priorities. \$243 500 — 48 months.

87-0248 REDATAM (Latin America and the Caribbean) — Phase II*

For the Comisión Económica para América Latina, Chile, to enable the Centro Latinoamericano de

Demografia to help countries integrate population factors into their development planning and sectoral programs, particularly at the local and regional levels, and to ensure that the 1990 population and housing censuses in Latin America and the Caribbean provide information for this purpose. \$214 700 — 24 months.

87-0253 National information system (Jordan)*

For the Royal Scientific Society, Amman, to enable the Scientific and Technical Information Centre and the Socio-Economic Information Centre to assist in the establishment of a national information system to provide information to the public and private sectors through the creation, management, and coordination of data bases and data centres. \$420 000 — 24 months.

87-0256 International Development Information Network on Research in Progress (Global)*

For the Consejo Latinoamericano de Ciencias Sociales, Argentina; the Association of Development Research and Training Institutes of Asia and the Pacific, Malaysia; the European Association of Development Research and Training Institutes, the Netherlands; and the Conseil pour le développement de la recherche économique et sociale en Afrique, Sénégal, to improve the flow of information on social science research and to foster regional and interregional cooperation in support of the development process. \$274 000 — 36 months.

87-0278 Training course for paraprofessional librarians (Nepal)*

For Tribhuvan University, Kirtipur, to enable its central library to train paraprofessional librarians in the skills required to organize their libraries systematically and serve their clientele. \$51 000 — 24 months.

87-0282 Credit Unions Information System (Latin America)*

For the Fundación Educativa de la Confederación Latinoamericana de Cooperativas de Ahorro y Crédito, Panama, to strengthen and develop credit unions as a component in the development process by providing timely and pertinent information to the members of the movement. \$97 600 — 24 months.

87-0303 DEVINSA (Maldives)*

For the Ministry of Planning and Development, Male, to strengthen the country's information base in support of economic and social development, by participating in the Development Information Network for South Asia (DEVINSA) project. \$31 400 — 24 months.

87-0317 ECOKONWMICS: a microcomputer-based expert system for economic planning and policy-making (the Philippines)*

For the Social Weather Stations Incorporated, Quezon City, to develop a prototype software system that can demonstrate how microcomputers and artificial intelligence techniques can provide

cost-effective solutions to the problem of managing and integrating economic data and models to support planning and policy-making. \$60 000 — 12 months.

87-0339 MINISIS resource persons (Latin America)*

For the Colegio Mayor de Neustra Señora del Rosario, Colombia, and the Centro de Investigación y Docencia Económicas, Mexico, to demonstrate the effectiveness of MINISIS resource persons as a means of providing training and assistance to new users of MINISIS in a national and regional context and to promote the application of MINISIS as a software tool for information processing throughout Latin America. \$94 180 — 24 months.

87-1012 Patents: technological information (the Caribbean-Canada)

For the Comisión Económica para América Latina y el Caribe, Chile, and Consumer and Corporate Affairs Canada, Ontario, to strengthen and improve the various aspects of industrial property through the use of patent information, thus providing a program for the successful use of technological information from patents for industrial development in the Caribbean region. \$383 955 — 36 months.

87-1019 Poisons information package for developing countries (Global)

For the World Health Organization, Switzerland; the Canadian Centre for Occupational Health and Safety, Ontario; and the Centre de toxicologie du Québec to develop a multilingual (English, French, and Spanish) interactive computerized information package on diagnosis and treatment of poisonings, as well as a framework for storing data on products on the local market and for collecting case data on poisonings, with a view to strengthening the capability of developing countries to prevent and respond to chemical poisonings. \$256 000 — 36 months.

87-1023 Remote sensing contribution to soil mapping (Morocco-Canada)

For the Institut agronomique et vétérinaire Hassan II, Rabat, and the University of Sherbrooke, Quebec, to choose and adopt a methodology based on satellite remote sensing for soil mapping in Morocco and to prepare a Moroccan team of researchers to use it. \$135 355 — 24 months.

87-1037 Remote sensing and rural-development planning (Mali-Canada)

For the ministère de l'Agriculture, Bamako, and Laval University, Quebec, to improve the skills of the Direction nationale du génie rural of Mali in using remote sensing to identify the best potential locations for agricultural development in the Niger River valley. \$145 303 — 24 months.

Social Sciences

86-0243 Energy policy and planning (eastern and southern Africa)

For the Swedish Agency for Research Cooperation with Developing Countries to support a program of

research and associated training designed to meet immediate and longer-term needs of energy policymakers and planners and to develop necessary skills in energy policy research in the region. \$288 620 — 30 months.

87-0002 Small regional grants (Peru) — Phase II

For the Asociación Peruana para el Fomento de las Ciencias Sociales, Lima, to administer a program of small grants designed to build the research capacity of provincial universities in Peru. \$108 000 — 24 months.

87-0005 Socioeconomic adaptation in Indian communities (Ecuador)

For the Centro Andino de Acción Popular, Quito, to develop a model for understanding processes of change in north Andean peasant communities, with the ultimate aim of developing more appropriate and specific forms of support for these communities. \$87 000 — 18 months.

87-0006 Technological and structural change in the clothing industry (Turkey)

For the Turkish Social Science Association, Ankara, to examine the roots of dynamism of the Turkish clothing complex and to determine the new investments and policy initiatives needed to maintain and improve the competitiveness of the sector. \$43 670 — 18 months.

87-0008 Adjustment and technological change in the metalworking industry (Nicaragua)*

For the Instituto Nicaraguense de Investigaciones Económicas y Sociales, Managua, to analyze the industrial adjustment process within a set of metalworking factories and the implications for industrial development, technology transfer strategies, and planning policies within the sector. \$78 090 — 21 months.

87-0011 Diffusion of locally developed technologies (Sierra Leone)

For the University of Sierra Leone, Freetown, to identify the factors that influence favourably or unfavourably the success of locally developed technologies. \$52 850 — 24 months.

87-0017 OSSREA support: small research grants (East Africa) — Phase V

For the Organization for Social Science Research in Eastern Africa (OSSREA), Ethiopia, to strengthen research capacity in the social sciences by encouraging local scholars to carry out research that contributes to an understanding of social and economic change in countries of eastern and southern Africa. \$284 510 — 24 months.

87-0020 Secondary education (Argentina) — Phase II

For the Facultad Latinoamericana de Ciencias Sociales, Buenos Aires, to strengthen and consolidate an integrated program of research, dissemination, and training activities to increase the understanding of

innovations at the secondary education level as these relate to curricular content. \$199 800 — 30 months.

87-0031 Refugee settlements (Somalia) and refugee research network (Africa and Asia)

For Haqabtir, Mogadishu, to provide a socioeconomic and demographic profile of refugees and nonrefugees in refugee-affected areas of Somalia and to provide funds to enable networking among researchers in Centre-supported refugee projects in Africa and Asia. \$213 000 — 30 months.

87-0040 Seasonal workers and agricultural modernization (Chile)

For the Grupo de Estudios Agro-Regionales, Santiago, to examine the situation of temporary and seasonal workers in the export-fruit regions in Chile with respect to demographic behaviour, the labour market, and access to social services. \$133 000 — 24 months.

87-0045 Monetary policy in low-income primary-producing less-developed countries (Global)

For the Overseas Development Institute, U.K., to gather information on some aspects of monetary policy and to evaluate monetary policy in terms of its success or failure in achieving monetary targets and, more generally, in terms of its role in stabilizing the economy. \$49 000 — 21 months.

87-0050 Impact of new communications technologies (Peru)

For the Centro de Estudios sobre Cultura Transnacional, Lima, to enable the Instituto para América Latina to explore the impact of new television technologies, corporate structures, and interindustry relationships on national television systems in Latin America and to assess the possibilities for developing an economically viable, autonomous television industry in line with national needs and demands. \$90 530 — 18 months.

87-0051 Technological change and agroindustry development (Uruguay)

For the Centro de Investigaciones Económicas, Montevideo, to identify the constraints on and possibilities for improving the efficiency and export potential of agroindustry and to identify the policy framework required to promote technical change. \$80 330 — 18 months.

87-0053 Informal-sector street foods (India)

For the Centre for Studies in Social Sciences, Pune, to assist the government in designing a policy to regulate, supervise, and facilitate street food vending. \$38 440 — 24 months.

87-0054 Informal sector assistance policies (Kenya)

For the University of Nairobi to enable the Department of Urban and Regional Planning to assist with the design of credit and training policies for the informal sector in Kenya. \$77 400 — 24 months.

87-0057 Community-managed organizations (Ecuador)

For the Centro de Educación y Promoción Popular, Quito, to study the conditions under which community-managed programs executed by second-tier peasant organizations succeed or fail. \$56 900 — 12 months.

87-0071 Participation of women in trade unions (Argentina)

For the Instituto Latinoamericano de Estudios Transnacionales, Buenos Aires, to identify the political, social, and ideological factors that marginalize working women from trade-union activities. \$45 630 — 12 months.

87-0074 Social security reform (Jamaica)

For the University of the West Indies, Kingston, to enable the Institute of Social and Economic Research to study the Jamaican National Insurance Scheme and to recommend specific changes to improve its management and place it on a financially sound footing. \$38 300 — 9 months.

87-0075 Hyperinflation, recession, and growth (Bolivia)

For the Universidad Católica Boliviana, La Paz, to enable the Instituto de Investigaciones Socio-Económicas to study the impact of hyperinflation and stabilization efforts on the structure of the Bolivian economy, with particular reference to the manufacturing sector. \$74 000 — 18 months.

87-0076 Resettlement programs and land tenure (the Caribbean) — Phase II

For the University of the West Indies, Barbados, to evaluate the concept and experience of official farming settlements as currently embodied in the policies of the countries concerned. \$61 800 — 18 months.

87-0077 Paths followed by general education students (Côte d'Ivoire)

For the Centre interafricain de recherches et d'études supérieures en sciences de l'éducation, Lomé, to retrace the academic and professional path of the secondary school students who were interviewed in 1979, so as to evaluate the internal and external efficacy of the education system. \$40 700 — 12 months.

87-0078 CDC: research and training program (Egypt) — Phase V

To assist the Cairo Demographic Centre (CDC) in achieving its research and training objectives in 1988 by supporting 10 African students enrolled in the General Diploma, Special Diploma, and Master's Degree programs in demography. \$161 100 — 12 months.

87-0087 Impact of firewood shortages on women's work and on family nutrition (Burkina Faso)

For the Société africaine d'études et de développement, Ouagadougou, to examine the extent to which the increasing scarcity of fuelwood in

Burkina Faso is affecting the workloads of rural women and the nutritional intake of families. \$53 100 — 18 months.

87-0088 Debt management (Nicaragua)*

For the Coordinadora Regional de Investigaciones Económicas y Sociales, Managua, to analyze the management of the Nicaraguan debt. \$26 340 — 18 months.

87-0099 Nonfarm employment (Indonesia)

For the National Planning Agency, Jakarta, to enable its Bureau of Manpower to evaluate ongoing rural nonfarm employment for women in Java. \$89 000 — 14 months.

87-0109 Rural electricity supply in Argentina: diffusion of microhydroelectric power plants

For the Instituto de Economía Energética, Buenos Aires, to examine legal, institutional, and financial mechanisms by which more rural people in Misiones could be supplied with electricity from a combination of centralized and decentralized systems. \$65 950 — 18 months.

87-0112 International consortium for economic research (sub-Saharan Africa)*

For the Rockefeller Foundation, USA, or a corporation instituted for the express purpose of managing this project, to support a multidonor program of macroeconomic research in sub-Saharan Africa. \$750 000 — 36 months.

87-0120 Rental and shared housing (Latin America)*

For the Instituto Universitario de Pesquisas, Brazil; the Pontificia Universidad Católica de Chile; the Centro de la Vivienda y Estudios Urbanos, Mexico; the Centro de Estudios Urbanos, Venezuela; and University College, London, U.K., to analyze the rental and shared housing market in major cities of four Latin American countries (Brazil, Chile, Mexico, and Venezuela) and to make appropriate policy recommendations. \$366 700 — 24 months.

89-0121 Macroeconomic research network (Latin America)

For the Fundación para la Educación Superior y el Desarrollo, Colombia, to support joint research into structural adjustment and the effectiveness of stabilization policies and to implement a program for training young scholars at the participating centres. \$485 000 — 36 months.

87-0125 Educational Research Network of Eastern and Southern Africa — Phase II*

For the University of Botswana; the National University of Lesotho; the University of Swaziland; the Ministry of Education, Tanzania; Makerere University, Uganda; and the University of Zambia to support the Educational Research Network of Eastern and Southern Africa to promote collaboration and information-sharing among researchers at the national, regional, and international levels. \$375 000 — 24 months.

87-0129 Economic policy analysis (Chile) — Phase II

For the Corporación de Investigaciones Económicas para Latinoamérica, Santiago, to contribute to the analysis of the development strategy and policy packages for dealing with current Latin American problems in the short and long term. \$519 620 — 24 months.

87-0139 Contract farming and outgrower schemes (Southeast Asia)*

For the Thai University Research Association; the Ministry of Agriculture, Indonesia; and the University of Malaysia to assess the experience of contract farming and outgrower schemes in selected countries, particularly with respect to smallholder welfare and agricultural development policy. \$247 750 — 24 months.

87-0140 Debt renegotiation (Global) — Phase II

For Alternativas de Desarrollo, Costa Rica, to examine the consequences of cross-conditionality and banking regulation for debt management by less-developed countries. \$155 500 — 24 months.

87-0142 Balance of payments adjustment (Peru) — Phase III

For the Grupo de Análisis para el Desarrollo, Lima, to increase understanding of some of the most pressing macroeconomic problems of the Peruvian economy and to develop means through which alternative policies can be monitored and with which to predict their short-run effects. \$174 500 — 24 months.

87-0143 Urban development and policies (Ecuador) — Phase II

For the Centro de Investigaciones CIUDAD, Quito, to develop a comprehensive understanding of selected urban problems and relevant policies in the context of contemporary urbanization in Ecuador. \$300 000 — 36 months.

87-0144 The grocery basket (Bolivia)

For the Centro de Estudios de la Realidad Económica y Social, La Paz, to determine the evolution of food consumption, the channels of distribution of the main food products, and the survival food strategies used by the population in the major urban and rural centres of the country. \$130 700 — 24 months.

87-0145 Regional socioeconomic impacts of export processing zones (Asia) — Phase II*

For the Centre for Guangdong Social and Economic Development Studies, China; Seoul National University, South Korea; the University of the Philippines in Diliman; and the University of Sydney, Australia, to investigate the social and economic aspects of the subcontracting links that have been established between firms located in export processing zones and rural areas. \$122 900 — 12 months.

87-0150 Adolescent fertility (Cameroon)

For the ministère du Plan et de l'Aménagement du territoire, Yaoundé, to understand the phenomenon of adolescent fertility, its impact on education and maternal and infant mortality, its socioeconomic causes, and its contraceptive implications. \$151 720 — 18 months.

87-0152 Women and agricultural modernization in northeastern Brazil*

For the Fundação Joaquim Nabuco, Recife, to analyze the conditions under which women in northeastern Brazil have been absorbed into irrigation projects so as to assess the impact of agricultural modernization on the traditional status of women, with particular reference to extreme poverty and labour discrimination. \$160 500 — 24 months.

87-0159 Fertility and adolescent sociopsychological behaviour (Mali)

For the École normale supérieure, Bamako, to enable the Institut supérieur de formation et de recherche appliquée to carry out a detailed psychological study of adolescent fertility behaviour. \$93 700 — 24 months.

87-0160 Adolescent fertility (Mauritania)*

For the Direction de la statistique et de la comptabilité de Mauritanie, Nouakchott, to enable the Centre d'études démographiques et sociales to undertake an in-depth study of adolescent fertility, based mainly on data from the national fertility survey. \$52 100 — 24 months.

87-0162 Community organizations (Peru)*

For the Universidad Nacional San Antonio Abad de Cuzco (UNSAAC), to enable the Instituto de Investigación de UNSAAC and the Netherlands Universities Foundation for International Cooperation to study the factors behind the relative success of peasant communities and to consider the adaptations that might make them the organizational alternative of choice for Peruvian rural development. \$68 450 — 18 months.

87-0166 Indian children and reading in primary schools (Guatemala)

For the Universidad del Valle de Guatemala to examine current teaching practices and learning results for both Indian and *ladino* (Spanish-speaking) populations in public schools to develop guidelines aimed at improving children's reading skills. \$21 230 — 12 months.

87-0176 Adolescent fertility (Côte d'Ivoire)*

For the Direction de la statistique, Abidjan, to undertake an in-depth study of the data from the national fertility survey. \$86 400 — 24 months.

87-0181 Consortium Graduate School (the Caribbean) — Phase III

For the University of the West Indies, Jamaica, to support the Consortium Graduate School by offering 15 graduate scholarships, 6 to start the program of studies toward the master's degree program and

9 to support further master's or doctoral research projects. \$76 200 — 12 months.

87-0183 Weathering economic crisis (Barbados)

For the University of the West Indies, Bridgetown, to enable the Institute of Social and Economic Research to generate policy-oriented information that may be used to improve the effectiveness of adjustment strategies and, at the same time, reduce the negative effect of recessions on low-income women and their families. \$55 610 — 18 months.

87-0202 Balance of payments, savings, and investment (Colombia) — Phase III

For the Fundación para la Educación Superior y el Desarrollo, Bogotá, to study the relationship between financial variables and the performance of production, consumption, investment, employment, and the balance of payments in the Colombian economy. \$128 600 — 24 months.

87-0207 Research review and advisory program in education (Southeast Asia) — Phase II*

For the Southeast Asian Research Review and Advisory Group, Malaysia, to maintain and strengthen networking between educational researchers, policymakers, and practitioners in countries of the Association of South East Asian Nations. \$304 000 — 36 months.

87-0208 Birth interval dynamics (India) — Phase II*

For the National Council of Applied Economic Research, New Delhi, to identify the factors determining fertility, mortality, and health in India. \$185 300 — 36 months.

87-0210 Small-scale aluminum enterprises (Ghana)*

For the National Service Secretariat, Accra, to enable the University of Ghana to study the small-scale aluminum industry in both urban and rural Ghana with regard to the technologies in use and opportunities for employment. \$150 710 — 24 months.

87-0213 Review of scientific institutions and public policy (India)*

For the Centre for the Study of Developing Societies, Delhi, to initiate a series of systematic reviews of the development of scientific institutions and infrastructure in India. \$84 360 — 30 months.

87-0215 Fertility changes in Southeast Asia

For the UPecon Foundation, the Philippines, to specify and measure the effects of economic growth and socioeconomic development on fertility and fertility change in Southeast Asia. \$62 000 — 12 months.

87-0219 Determinants of diarrheal risk (the Philippines)

For Xavier University, Cagayan de Oro City, to enable the Research Institute for Mindanao Culture to

conduct interdisciplinary anthropological research that will assess the risk factors related to childhood diarrheal disease in Mindanao. \$16 300 — 12 months.

87-0220 Industrial policy (Ecuador) — Phase II*

For the Centro de Planificación y Estudios Sociales, Quito, to examine the effect of government policies on the pattern of industrial development. \$162 630 — 24 months.

87-0251 Local governments in medium-sized cities (Latin America)*

For SUR-Documentación, Estudios, Educación, Chile, to analyze the ability of communities in selected medium-sized cities in Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, and Peru to satisfy the needs of the people, particularly those earning the lowest incomes. \$440 000 — 24 months.

87-0259 Family environment and child learning (Chile)*

For the Centro de Estudios y Atención del Niño y la Mujer, Santiago, to identify the social and familial variables associated with low achievement in preschool children and to develop an intervention strategy that aims to improve family interactions. \$50 000 — 18 months.

87-0265 School-community system for literacy (Uganda)*

For the Institute of Teacher Education, Kampala, to harness the efforts of both school and community to work together to master literacy skills that will improve the quality of life. \$157 000 — 24 months.

87-0268 Qualitative research and training on nonformal education (Thailand)*

For the Ministry of Education, Bangkok, to enable its Department of Nonformal Education to develop research capacity among key nonformal educators to collect, validate, and utilize data for planning and management. \$95 000 — 30 months.

87-0273 Global impoverishment and sustainable development (Argentina-Canada)*

For the Fundación Bariloche and the University of British Columbia, Vancouver, to review concepts and research methods relating to the problem of global impoverishment. \$53 640 — 6 months.

87-0276 Adolescent fertility (Nigeria)*

For the National Population Bureau, Lagos, to undertake an in-depth analysis of adolescent fertility, drawing mainly upon data from the National Fertility Survey. \$89 800 — 24 months.

87-0279 National alcohol program: impact and role in a new energy context (Brazil)

For the Universidade Federal do Rio de Janeiro to assess Brazil's national alcohol program in the context of reduced international oil prices and increased domestic oil output, with a view to making policy recommendations concerning the

program's future role in the country's energy system. \$187 040 — 30 months.

87-0280 Employment patterns and social policies in the public sector (Argentina)*

For the Centro de Estudios de Estado y Sociedad, Buenos Aires, to examine the experience of women in public-sector employment in Argentina. \$71 720 — 18 months.

87-0283 Micro- and small-scale enterprise sector (Costa Rica)*

For the Universidad Nacional, Heredia, to enable the Instituto de Estudios Sociales en Población to assess the characteristics and socioeconomic role of micro- and small-scale enterprises (MSEs) in national development and to identify institutional measures to accelerate the development of MSEs. \$74 300 — 15 months.

87-0284 Education and cooperative development (Latin America) — Phase II

For the Consejo de Educación de Adultos de América Latina, Chile, to examine the organizational, structural, and socioeconomic factors influencing the development, practice, and contribution of education in cooperatives. \$89 800 — 22 months.

87-0289 Political economy and stabilization (Turkey)*

For the Turkish Social Science Association, Ankara, to assess the effects of structural adjustment policies on the Turkish working class and peasantry. \$18 600 — 12 months.

87-0295 Migrant remittances (Bangladesh)*

For the Bangladesh Institute of Development Studies, Dhaka, to analyze labour migration to the Middle East to assess the local effects of skilled labour outflow and to analyze the productive use of foreign exchange remitted from earnings abroad. \$41 190 — 12 months.

87-0298 Impact of mining on the socioeconomic status of women (India)

For the Institute of Social Studies Trust, New Delhi, to make a detailed assessment of the costs and benefits of mining in Kumaon, an east-central Himalayan region of India, with a primary focus on its impact on the livelihood of women. \$87 370 — 24 months.

87-0299 Regional review of technical-vocational education (Latin America)*

For the World Bank, USA, to enable the Centro Interamericano de Investigación y Documentación sobre Formación Profesional to undertake a comprehensive assessment of the history, changes, and current practice of technical-vocational training systems in Latin America. \$43 420 — 12 months.

87-0301 Impact of social and economic change on women (Ghana)

For the University of Ghana, Accra, to enable the Institute of African Studies to examine the impact of social and economic change in the Ada Songor

Lagoon region on the reproductive and productive roles of women. \$17 890 — 9 months.

87-0302 Rural teachers and school effectiveness (Chile)*

For the Facultad Latinoamericana de Ciencias Sociales, Santiago, to examine the characteristics of rural teachers and their previous training in relation to their teaching practices and to student learning. \$57 350 — 16 months.

87-0307 Third age and social services (Colombia)*

For the Corporación Centro Regional de Población, Bogotá, to generate information and develop a methodology for the design and implementation of a national policy on the third age based on an analysis of the interrelations between the aging of the population and the development process. \$72 950 — 14 months.

87-0310 Participation and local government (Chile)*

For the Facultad Latinoamericana de Ciencias Sociales, Santiago, to investigate in depth the state policies and programs for the critically poor, and the social activities of nongovernmental organizations in the Santiago metropolitan area. \$82 870 — 24 months.

87-0311 Representative institutions and social policies (Uruguay)*

For PEITHO-Sociedad de Análisis Político, Montevideo, to analyze the political and bureaucratic factors that influence the formulation and implementation of social policies at the level of city government of Montevideo. \$74 130 — 15 months.

87-0312 NGOs and public policies (India)*

For the Society for Participatory Research in Asia, New Delhi, to conceptualize the present and potential role of nongovernmental organizations (NGOs) as promoters of development, actors involved in policy-making and policy implementation, and mechanisms of aggregation of popular demands. \$70 480 — 24 months.

87-0313 Representative institutions and public policies (Argentina)

For the Centro Latinoamericano para el Análisis de la Democracia, Buenos Aires, to analyze and conceptualize the relations between the state, political parties, unions, and business groups and their role in formulating and implementing public policies. \$82 720 — 18 months.

87-0314 Diffusion of improved biomass stoves (China)*

For Tsinghua University, Beijing, to enable the Institute for Techno Economic and Energy Systems Analysis to analyze and evaluate the national experience in developing and diffusing improved cooking stoves. \$84 370 — 24 months.

87-0316 Country review of science and technology policy (Colombia)*

For the Fondo Colombiano de Investigaciones

Científicas y Proyectos Especiales Francisco José de Caldas, Bogotá, to review current science and technology policy in Colombia and to recommend a new long-term science and technology plan for the country. \$103 630 — 18 months.

87-0321 Role of the mass media in nonformal education (Argentina)*

For the Centro de Estudios de Estado y Sociedad, Buenos Aires, to describe and analyze the relationship between the educational needs and demands of the disadvantaged sector and the educational role and practice of the mass media operating under the new government policies. \$101 250 — 22 months.

87-0322 Social discrimination and education (Peru)*

For the Pontificia Universidad Católica del Perú, Lima, to enable its Faculty of Social Sciences to identify the existing mechanisms of ethnic-, gender-, and labour-based discrimination in the educational system so as to counteract them and contribute to the achievement of a democratic environment in the educational community. \$86 100 — 18 months.

87-0326 Women, labour markets, and crisis (Dominican Republic)*

For the Centro de Investigación para la Acción Femenina, Santo Domingo, to collect data on the living and working conditions of urban women in the Dominican Republic and on the characteristics of their economic and social participation. \$86 990 — 24 months.

87-0330 Access to land ownership (Kenya)*

For the International Centre of Insect Physiology and Ecology, Nairobi, to create a better understanding of factors determining women's access to and ownership of land and how they affect women's roles in the agricultural household and in management of agricultural production. \$46 820 — 24 months.

87-0332 Consequences of women's migration (Mali)*

For the Institut des sciences humaines, Bamako, to determine the social, economic, and cultural consequences of the exodus of women from rural to urban areas with a view to helping women's groups in both areas to make the migratory experience a positive one. \$75 700 — 24 months.

87-0337 Women and urban poverty (India)*

For the Society for the Promotion of Area Resource Centres, Bombay, to generate a body of knowledge on issues identified by the urban poor, particularly urban women, in such a way that local communities, as well as practitioners elsewhere, can make positive use of it. \$149 290 — 36 months.

87-0340 Labour migration and employment policies (Venezuela)*

For the Ministerio del Trabajo, Caracas, to enable the Instituto de Investigaciones Económicas y

Sociales of the Universidad Católica Andrés Bello to diagnose the migration patterns, occupational characteristics, and training needs of the industrial labour force in two frontier districts. \$15 000 — 8 months.

87-0344 Gender-focused research network (Tanzania)

For the Eastern and Southern African Management Institute, Arusha, to fund participants in the research methodology seminars, so as to enable them to implement research proposals related to women in development, and to encourage the establishment of a network of people interested in women-in-development and related gender issues. \$227 480 — 24 months.

87-1013 Canadian foreign investment through small- and medium-sized enterprises (Argentina-Canada)

For the University of Quebec at Montreal, to enable the Centre de recherche en développement industriel et technologique in cooperation with the Centro de Estudios de Desarrollo y Relaciones Económicas Internacionales, Buenos Aires, to analyze empirically the experience of small- and medium-sized Canadian enterprises. \$63 240 — 12 months.

87-1038 Classroom interaction and student performance (India-Canada)*

For the Educational Research Foundation, Pune, and the University of Alberta, Edmonton, to introduce ethnographic research to a selected group of researchers in India as a method that complements and integrates other methods in educational research (case study, qualitative, behavioural, experimental, and quasi-experimental). \$77 450 — 10 months.

87-1042 Issues in Chinese education (China-Canada) — Phase III*

For the East China Normal University, Shanghai, and the University of Victoria, British Columbia, to examine curriculum, resource materials, classroom methodology, in-school administration, and evaluation of middle-school education in China and to suggest possible areas of reform. \$205 950 — 27 months.

87-1053 Organizations for community participation (Central America and the Caribbean-Canada)*

For the Centro de Estudios sobre América, Cuba; the University of the West Indies (UWI), Jamaica; and York University, Ontario, to enable the Centro de Estudios sobre América, the Institute of Social and Economic Research at UWI, and the Centre for Research on Latin America and the Caribbean at York University to produce a comparative analysis of the present and potential role of organizations for community participation as structures capable of democratizing the process of formulating and implementing public policies in Costa Rica, Cuba, Jamaica, and Nicaragua. \$131 370 — 24 months.

Division activity projects

Apart from the activities described in the preceding pages, IDRC supports numerous relatively small-scale projects designed to support, in one way or another, the activities in progress in the divisions. These are such things as promoting workshops or seminars on the research priorities in a given region or field, enabling researchers from developing countries to participate in meetings of experts in various parts of the world, or making it possible for specialists to visit and assist a project team in another country.

Most division activity projects cover the cost of meetings or of consultations directly or indirectly connected with IDRC-funded research. During the past financial year, IDRC approved division activity projects to a total cost of \$6 227 000. The following are examples.

- An agricultural institute in Thailand put the finishing touches to a 600 000-word English-Thai agricultural dictionary.
- Researchers from several Latin American and West Indian countries met to explore ways of

improving the conditions of small-scale coffee producers.

- Fifteen researchers met to set up a network of exchanges on crop systems in the West Indies.
- A consultant toured India to study popular education groups involved in community development.
- An international conference with more than 50 participants was held in Ottawa on leishmaniasis, a tropical disease, in June.
- At Manila, an international workshop was held in January on the role of women in providing water and hygiene services.
- Thirty people attended a training workshop on scholarly publishing in the Caribbean.
- A Canadian hydrogeologist visited Burkina Faso to prepare a joint project.
- A study group analyzed the policies applied to combatting the drought in Africa to review the efforts made so far.
- A consultant assisted Ugandan representatives to consider constitutional options.

Fellowships

Pearson fellowships

Pearson fellows pursue a nondegree program in public administration at Carleton University and the University of Ottawa with practical attachment with a government department.

Anassi, Abdelkhalek (Morocco)

Brito, Maria Cecília Wey de (Brazil)

Fadaq, Mohammed Ahmed (Yemen)

Issar, Ranjit (India)

Kikala, Philip (Papua New Guinea)

Luengo, Oscar Humberto (Chile)

Mivuba, Antime (Burundi)

Mkondiwa, George C. (Malawi)

Mukuna, Ka Mukuna Longola (Zaire)

Ouédraogo, Marceline (Burkina Faso)

Palomino Gamarra, Maria Teresa (Peru)

Paranawithana, Upul (Sri Lanka)

Picar Jimenez, Gloria (the Philippines)

Raja Kamarudin, Bin Raja Ahmad (Malaysia)

Salia, Edward K. (Ghana)

Sandhu, Deepak (India)

Sigiliano, Ernesto de Campos (Brazil)

Project-related awards

Abagi, Jared O. (Kenya)

Doctoral studies in educational sociology; Social Science and Humanities Research Council, McGill University, Montreal, PQ, Canada

Buelna, Geraldo (Mexico)

Practical training in advanced wastewater treatment and recovery processes and biotechnologies; Pig and Poultry Research Training Institute, Singapore

Jeng, Momodou (the Gambia)

Doctoral degree in social demography; Department of Sociology, University of Western Ontario, London, ON, Canada

Kabbah, Shecou-Bah (Sierra Leone)

Master's degree in water supply and sanitation; Water and Engineering for Developing Countries,

Loughborough University of Technology, Loughborough, Leics., U.K.

Makambila, Casimir (Congo)

Doctoral thesis in microbiology; Laboratoire de microbiologie, Université de Clermont FD II, France

Mosimanyana, Bernard M. (Botswana)

Doctoral studies in animal science; Faculty of Graduate Studies, University of Guelph, Guelph, ON, Canada

Mpemi, Malijeng Theresia (Lesotho)

Master's degree in agricultural economics; University of Saskatchewan, Saskatoon, SK, Canada

Musi, Mahlape (Lesotho)

Master's degree in education; Queen's University, Kingston, ON, Canada

Mwangi, Joel G. (Kenya)

Training in recent advances in plant tissue culture in crop production and management; Bath, Avon, U.K.

Njiru, Daniel M. (Kenya)

Master's degree in agroforestry; University of Nairobi, Nairobi, Kenya

Peng, Chun (China)

Doctoral studies in fish physiology; Department of Zoology, University of Alberta, Edmonton, AB, Canada

Sall, Oumar (Mauritania)

Training in fish breeding; Centre de formation piscicole, Bouaké, Côte d'Ivoire

Sheikh, Omar Mohamed (Somalia)

Master's training in plant breeding and genetics; Tamil Nadu Agricultural University, Coimbatore, India

Sogue, Ousmane (Sénégal)

Studies toward a master's degree in urbanization; University of Montreal, PQ, Canada

Sopeng, Limpho (Lesotho)

Studies toward a master's degree in agricultural economics; Department of Agricultural Economics, University of Saskatchewan, Saskatoon, SK, Canada

Program-related awards

Achacha, John (Kenya)

Research in dehuller operation training; Rural Industries Innovation Centre, Gaborone, Botswana

Alarcon, Angelica (Guatemala)

Studies toward a master's degree in sociology;
Confederación Universitaria Centroamericana,
Universidad de Costa Rica, San José, Costa Rica

Anon, Manmontri (Thailand)

Studies toward a master's of science degree in
clinical epidemiology; Department of Clinical
Epidemiology and Biostatistics, McMaster University,
Hamilton, ON, Canada

Aquino, Luis A. (El Salvador)

Studies toward a master's degree in sociology;
Confederación Universitaria Centroamericana,
Universidad de Costa Rica, San José, Costa Rica

Bah, Mamadou (Sénégal)

Studies toward a master's degree in library and
information sciences; Faculty of Library and
Information Sciences, University of Montreal, PQ,
Canada

Banda, Elizabeth E. (Malawi)

Studies toward a doctoral degree in nursing;
University of Maryland, Baltimore, MD, USA

Barrera, Rafael A. (El Salvador)

Studies toward a master's degree in sociology;
Confederación Universitaria Centroamericana,
Universidad de Costa Rica, San José, Costa Rica

Beltrand, Olga R. (Uruguay)

Studies toward a master's degree in sociology;
Centro de Informaciones y Estudios del Uruguay,
Department of Sociology, Instituto Universitaria de
Pesquisas do Rio de Janeiro, Rio de Janeiro, Brazil

Boyce, Stephen Leo (Barbados)

Studies toward a master's degree in fisheries
biology; Department of Biology, University of West
Indies, Bridgetown, Barbados

Cai-Yao, Yuan (China)

Vegetable production training; Asian Vegetable
Research and Development Center, Bangkok,
Thailand

Camará, Iaia (Guinea Bissau)

Technical training, practical exercises, and visits to
other documentation centres in the information field;
Centro de Informação e Documentação Amílcar
Cabral, Lisbon, Portugal

Diallo, Anis (Sénégal)

Research training in aquaculture; Auburn
University, Auburn, AL, USA

Dottin, Milagros (Dominica)

Studies toward a master's degree in demography;
Centro de Estudios Demográficos y de Desarrollo
Urbano, Colegio de México, Mexico

Dumangane, Adélia Sansão (Mozambique)

Technical training, practical exercises, and visits to
other documentation centres in the information field;
Centro de Informação e Documentação Amílcar
Cabral, Lisbon, Portugal

Filmus, Daniel Fernando (Argentina)

Studies toward a master's degree in education;
Universidade Federal Fluminense, Niterói, Brazil

Garcia-Vela, Luis A. (Guatemala)

Studies toward a master's degree in food science;
University of Guelph, Guelph, ON, Canada

Gasarasi, Charles P. (Tanzania)

Doctoral field research on the effect of Africa's
exiles and refugees on inter-African state relations;
Department of Political Science, Tulane University,
New Orleans, MS, USA

Ghani, Zainal (Malaysia)

Doctoral studies in education; University of
Southampton, Southampton, Hants, U.K.

Gnom, Aly (Sénégal)

Research in gynecology and obstetrics; Service de
gynécologie-obstétrique, Maternité de la Belle de Mai,
Marseille, France

Godinez, Caroline (Guatemala)

Studies toward a master's degree in foods and
nutrition; Faculty of Graduate Studies, University of
Manitoba, Winnipeg, MB, Canada

Goh, Sing Yau (Malaysia)

Advanced study in theory and application of
computer-simulated fluid-flow phenomena; Imperial
College, London, U.K.

Gonzalez, Emilio P. (Nicaragua)

Studies toward a master's degree in sociology;
Confederación Universitaria Centroamericana,
Universidad de Costa Rica, San José, Costa Rica

Guisado, Chita (Chile)

Studies toward a master's degree in zoology;
Universidad Austral de Chile, Valdivia, Chile

Gutierrez, Maria Isabel (Colombia)

Studies toward a master's degree in epidemiology
and biostatistics; Department of Epidemiology and
Biostatistics, McGill University, Montreal, PQ,
Canada

Hasrom, Encik bin Haron (Malaysia)

Training in educational publishing and books; Banff
School of Fine Arts, Banff, AB, Canada

Hoanh, Mai Thach (Viet Nam)

Study of root-crops improvement through polycrops
techniques; Visayas State College of Agriculture,
Baybay, the Philippines

Hong Fu, Yang (China)

Vegetable production training; Asian Vegetable
Research and Development Center, Bangkok,
Thailand

Hubert, Seri Z. (Côte d'Ivoire)

Doctoral thesis on rural economics; Institut
National Agronomique, Paris, France

Injai, Aissatu (Guinea Bissau)

Technical training, practical exercises, and visits to
other documentation centres in the information field;

Centro de Informação e Documentação Amílcar Cabral, Lisbon, Portugal

Irias, Jorge A. (Honduras)

Studies toward a master's degree in sociology; Confederación Universitaria Centroamericana, Universidad de Costa Rica, San José, Costa Rica

Kamal, Medhat El-Sayed (Egypt)

Studies toward a doctoral degree in clinical epidemiology; International Clinical Epidemiology Program, McMaster University, Hamilton, ON, Canada

Kandasamy, Veeranan (India)

Studies in the master's of public health program; Institute of Public Health, University of the Philippines, Manila, the Philippines

Kangsarn, Devahastin (Thailand)

Research seminar on communication; University of Hawaii, Honolulu, HI, USA

Khanal, Prakash (Nepal)

Training on communication planning; United Nations Development Programme on Development Training and Communication Planning, Bangkok, Thailand

Kimani, Muiruri John (Kenya)

Training course on rural energy planning; Technische Hogeschool Twente, Enschede, the Netherlands

Krawczyk, Nora (Argentina)

Studies toward a doctoral degree in education; Universidade Estadual de Campinas, São Paulo, Brazil

Larrea, Carlos (Ecuador)

Studies toward a doctoral degree in social and political thought; Faculty of Graduate Studies, York University, Downsview, ON, Canada

Mahmood, Syed A. (Bangladesh)

Research and preparation of doctoral thesis in economics; University of Oxford, Oxon., U.K.

Maritim, Gabriel K. (Kenya)

Participate in a nutritional surveillance workshop; World Health Organization Training Centre, Réunion, Mauritius

Martins, Balmira Langa (Mozambique)

Technical training, practical exercises, and visits to other documentation centres in the information field; Centro de Informação e Documentação Amílcar Cabral, Lisbon, Portugal

Morales, Mario R. (Guatemala)

Studies toward a master's degree in sociology; Confederación Universitaria Centroamericana, Universidad de Costa Rica, San José, Costa Rica

Morris, Kerwyn Leslie (Saint Vincent and the Grenadines)

Studies toward a master's degree in fisheries biology; University of the West Indies, Cave Hill, Barbados

Mtalo, Elifuraha G. (Tanzania)

Studies toward a master's degree in surveying engineering; School of Graduate Studies and Research, University of New Brunswick, Fredericton, NB, Canada

Muacanhia, Thomas (Mozambique)

Training for research methods for aphid ecology; International Centre of Insect Physiology and Ecology, Nairobi, Kenya

Obando, Carlos S. (Costa Rica)

Studies toward a master's degree in sociology; Confederación Universitaria Centroamericana, Universidad de Costa Rica, San José, Costa Rica

Oyeyinka, Oyebanji (Nigeria)

Studies toward a doctoral degree based on a thesis on technology policy and industrialization technology acquisition; Science and Technology Policy Group, University of Sussex, Brighton, Sussex, U.K.

Pradhan, A.S. (Nepal)

Training in communication planning; United Nations Development Programme on Development Training and Communication Planning, Bangkok, Thailand

Sam-Abbenyi, Amos (Cameroon)

Studies toward a master's degree in community medicine; Department of Social and Preventive Medicine, University of Montreal, PQ, Canada

Sharma, Shiva P. (Nepal)

Field research in Nepal for a doctoral degree in economics; School of Economics, La Trobe University, Melbourne, Australia

Simmons, Vasiti D. (Fiji)

Master's of library studies program and courses in advanced information studies; University of Hawaii, Manoa, HI, USA

Somchit, Chaipakdee (Thailand)

Training in communication and change — information economics; University of Hawaii, Honolulu, HI, USA

Somé, Ytouara Robert (Burkina Faso)

Advanced level management training; Centre africain d'études supérieures en gestion, Dakar, Sénégal

Thomas, Abator (Sierra Leone)

Studies for a master's degree in resources for learning; Department of Library and Information Studies, Loughborough University of Technology, Loughborough, Leics., U.K.

Uribe, Gabriela (Venezuela)

Training in research programs; Centro de Estudios del Desarrollo, Caracas, Venezuela

Valittuti, G. (Costa Rica)

Studies toward a master's degree in sociology; Confederación Universitaria Centroamericana, Universidad de Costa Rica, San José, Costa Rica

Villareal, Michael (the Philippines)

Undertake a master's degree in animal sciences; Central Luzon State University, Los Baños, the Philippines

Wong, Tat Meng (Malaysia)

Studies toward a doctoral degree in seed production and culture technology for bivalves; Pacific Biological Station, Nanaimo, BC, Canada

Wu, Yunying (China)

Studies toward a master's degree in agroforestry; University of the Philippines, Los Baños, the Philippines

Xin, Zhang (China)

Vegetable production training; Asian Vegetable Research and Development Center, Bangkok, Thailand

Yunlai, Xiao (China)

Vegetable production training; Asian Vegetable Research and Development Center, Bangkok, Thailand

Institution-related awards

Abdullah, Ramli B. (Malaysia)

Training course in carp seed production; Asia Pacific Research and Training Centre for Integrated Fish Farming, Network of Aquaculture Centres in Asia-Regional Lead Centre in China, Wuxi, China

Balajadia, Lilibeth C. (the Philippines)

Training course in carp seed production; Asia Pacific Research and Training Centre for Integrated Fish Farming, Network of Aquaculture Centres in Asia-Regional Lead Centre in China, Wuxi, China

Batururimi, Emmanuel (Burundi)

Master's degree in health administration specializing in research and planning; University of Montreal, Montreal, PQ, Canada

Gempis, Carmen L. (the Philippines)

Training course in carp seed production; Asia Pacific Research and Training Centre for Integrated Fish Farming, Network of Aquaculture Centres in Asia-Regional Lead Centre in China, Wuxi, China

Gningue, Youssoupha (Sénégal)

Professional development course in research-training-action; Department of Health Administration, University of Montreal, PQ, Canada

Hongwei, Yu (China)

Studies toward a master's degree in fish diseases; Department of Microbiology, University of Alberta, Edmonton, AB, Canada

Kamya, Elizabeth R. (Uganda)

Training in librarianship and information science; International Graduate Summer School, Aberystwyth, U.K.

Khelifi, H'Mida (Tunisia)

Studies toward a master's degree in economic sciences; University of Montreal, PQ, Canada

Liu, Qingyan (China)

English course for foreign students and master's course in cell biology; Department of Biology, University of New Brunswick, Fredericton, NB, Canada

Mat, Abd Majid B. (Malaysia)

Training course in carp seed production; Asia Pacific Research and Training Centre for Integrated Fish Farming, Network of Aquaculture Centres in Asia-Regional Lead Centre in China, Wuxi, China

Mshigeni, Kelo E. (Tanzania)

Attend meetings of Canadian deans of graduate studies and visit some graduate studies centres in Canada; Canada

Muze, Agnes S. (Tanzania)

Undertake a master's degree in philosophy in publishing; University of Stirling, Stirling, U.K.

National Research Council (Canada)

To allow the Principal Research Officer to travel to Garoua, Cameroon, and to provide training to two field technicians; National Research Council of Canada, Halifax, NS, Canada

Orejana-Acosta, Belen (the Philippines)

Training course in carp seed production; Asia Pacific Research and Training Centre for Integrated Fish Farming, Network of Aquaculture Centres in Asia-Regional Lead Centre in China, Wuxi, China

Ouedraogo, Souleymane (Burkina Faso)

Doctoral program in rural economics; Centre ivoirien de recherches économiques et sociales, Abidjan, Côte d'Ivoire

Semru, Mulugeta (Ethiopia)

Training course in administration; Senior University Administrator's Course, London, ON, Canada

Tchamegnon, Yawovi (Tonga)

Studies to complete a doctoral thesis in school administration; Faculty of Education Sciences, Laval University, Sainte Foy, PQ, Canada

Thabisi, Francinah M. (Lesotho)

Training in librarianship and information science; International Graduate Summer School, Aberystwyth, U.K.

Xu, Xueliang (China)

Training in fish nutrition; Fisheries and Environmental Services Division, Fisheries and Oceans Research Institute, Halifax, NS, Canada

Young Canadian researchers' awards

Abwunza, Judith M. (University of Toronto)

Undertake research on women and rural development "Logoli women of Western Kenya" for a doctoral thesis in anthropology; Institute of African Studies, Nairobi, Kenya

Beaudet, Pierre (University of Quebec)

Research for a thesis on "The options for socioeconomic development in South Africa after apartheid" to complete the requirements for a doctorate in sociology; Centre d'études africaines, Universidade Eduardo Mondlane, Maputo, Mozambique

Canel, Eduardo (York University)

Research on grass-roots organization among the urban poor in Montevideo for a doctoral thesis in political science at York University; Centro de Informaciones y Estudios del Uruguay, Montevideo, Uruguay

Castel, Josette (Laval University)

Research on the epidemiology of sickle-cell anemia toward a master's degree in experimental medicine in epidemiology; Centre régional de développement sanitaire, Cotonou, Benin

Comor, Emily (University of Toronto)

Research on the expectations and implications of development among various social groups in India toward a doctoral degree in anthropology; Department of Study of Social Sciences, Jawaharlal Nehru University, New Delhi, India

Cundall, Janet (Laval University)

Applied research on alternatives to destructive shifting cultivation toward a doctoral degree in social forestry; Lowlands Agriculture Research Station, Kerevat, Papua New Guinea

Daudelin, Jean (Laval University)

Research on the state regulation of minorities in Nicaragua from 1930 to 1945 toward a doctoral degree in political science; Confederación Universitaria Centroamericana, San José, Costa Rica

Doyer, Jacques (York University)

Field research in Argentina, Chile, and Uruguay on constitutional reform, parliamentary processes, and civil-military relationships in time of turmoil (Argentina 1976-1986) toward a doctoral degree in political science; Facultad Latinoamericana de Ciencias Sociales, Buenos Aires, Argentina

Fleming, Patricia T. (University of Toronto)

Thesis research on psychosocial factors influencing use of mental health services in Zambia toward a doctoral degree in behavioural sciences; Institute for African Studies, University of Zambia, Lusaka, Zambia

Hamilton, Hugh (University of Toronto)

Thesis research on soil organic-matter management and the erodibility of loessal soils in the Province of Shanxi toward a doctoral degree in geography; Shanxi Institute of Soil and Water Conservation, Lishi County, Shanxi Province, China

Kasisi, Robert Bag R. (University of Montreal)

Research on strategy for conserving and using fauna and flora toward a doctoral degree in land management; Parc national de Kahuzi Biega, Institut zaïrois pour la conservation de la nature, Bukavu, Zaire

King, Geoffrey A. (Canadian Broadcasting System)

Professional training on development issues in Cameroon, Gabon, and Sénégal; Centre international d'études en science et technologie de l'information, Dakar, Sénégal

Martin, Marie-Claude (Laval University)

Research on simulation techniques for commercial policy in developing countries with application to Tunisia toward a master's degree in economics; Institut d'économie quantitative, Tunis, Tunisia

Morissette, Jeannine (Laval University)

Research in Haiti and Benin on self development within projects of the Canadian International Development Agency toward a master's degree in sociology; Assemblée spirituelle nationale des Baha'is d'Haïti, Port-au-Prince, Haiti

Mourah, Lise (Laval University)

Research on the regulation of political culture in Algeria, its codes and functions toward a doctoral degree; Institut des sciences politiques, Université d'Alger, Ben Mehidi, Algeria

Nicholas, Sheila M. (Queen's University)

Research on the role of indigenous businessmen in Zimbabwean development toward a doctoral degree in political science; Department of Rural and Urban Planning, Zimbabwe Institute of Development Studies, Harare, Zimbabwe

Ouardi, Mohammadine (University of Montreal)

Research on the management of interlibrary cooperation in Morocco; École des sciences de l'information, ministère du Plan, Rabat, Morocco

Orbinski, James (McMaster University)

Study on the impact of population attitudes, sexual behaviours, government policy, and health-care infrastructure on human immunodeficiency virus (HIV) contagion in Rwanda, leading to a medical degree; Rwanda Union Mission, Kigali, Rwanda

Pépin, Jacques (University of Manitoba)

Research on epidemiology of human immunodeficient virus (HIV) infection in Kenya; Department of Medical Microbiology, University of Nairobi, and the Kenya Medical Research Institute, Nairobi, Kenya

Pilon, Paul G. (University of Waterloo)

Research on application of remote sensing and geographic information system data for assessing natural resources in northwestern Nigeria toward a doctoral degree in geography; Laboratory for Cartography and Remote Sensing, Department of Geography, Lagos, Nigeria

Protz, Maria (University of Guelph)

Internship in development support communication for rural women in India; Centre for Development of Instructional Technology, New Delhi, India

Roquet, Christine V. (Technical University of Nova Scotia)

Research on the influence of design on social

development through social institutions toward a master's degree in architecture; Universidad Nacional Autónoma de Nicaragua, León, Nicaragua

Rowe, Gerald E. (University of Western Ontario)

Research on the effect of substrate amino acid composition toward a doctoral degree in biochemical engineering; Centro de Investigación y Estudios Avanzados del Instituto Politécnico Nacional, Mexico

Schild, Veronica Ingrid (University of Toronto)

Research on popular organization and new forms of political participation in Chile toward a doctoral degree in political science; Centro de Investigación y Expresión Cultural y Artística, Santiago, Chile

Talbot, Pierre (Laval University)

Research on the biological recycling of pig manure toward a doctoral degree in biology; Instituto Tecnológico de Sonora, Sonora, Mexico

Tremblay, Johanne (University of Montreal)

Research on the organization of maternal and infant care toward a doctoral degree in anthropology; Chef-Lieu de Croix des Missions, Faculté d'ethnologie, Port-au-Prince, Haiti

Vallance, M.E. (McMaster University)

Research on migration and child nutrition in West New Britain in partial fulfillment of doctoral degree in anthropology; Department of West New Britain, Institute of Medical Research, Goroka, Papua New Guinea

Zakus, John David Lee (University of Toronto)

Research on the organization and evaluation of community participation in primary health-care

programs toward a doctoral degree in health administration; Centro de Investigaciones en Salud Pública, Condesa, Mexico

Gemini award

Mazzitelli, Teresa (*The London Free Press*)

Internship with the Gemini News Service and field research in East Africa; Gemini News Service, London, U.K.

John G. Bene fellowship in social forestry

Martins, Paul (Canada)

Follow-up and dissemination of research results on the development of a linear programming model in India to determine the human carrying capacity of the Central Himalayas; Indian Institute of Forestry Management, Bhopal, India

Other awards

Brunner, Jose (Chile)

Conduct research at IDRC and Canadian universities; Fellowships and Awards Division, IDRC, Ottawa, ON, Canada

Savigliano, Marta (Argentina)

To undertake an internship with the Women in Development Unit; Social Sciences Division, IDRC, Ottawa, ON, Canada

Publications

IDRC Publications

IDRC annual report 1986-1987/Rapport annuel CRDI 1986-1987. IDRC-003/87e,f, 91 + 83 pp.

Recherche à la ferme : participation des paysans au développement de la technologie agricole. Matlon, P., Cantrell, R., King, D., Benoit-Cattin, M. CRDI-189f, 217 pp.

Le rôle de la participation communautaire dans la prestation des services municipaux en Asie. Yeung, Y.M., McGee, T.G., ed. IDRC-238f, 292 pp.

Research methodology for livestock on-farm trials: proceedings of a workshop held at Aleppo, Syria, 25-28 March 1985 (Arabic version). Nordblom, T.L., Ahmed, A.K.H., Potts, G.R., ed. IDRC-242a, 236 pp.

Azúcar: ¿Amenazo o desafío? Evaluación del impacto resultante del desarrollo tecnológico en las industrias sucroquímicas y del jarabe de maíz con alto contenido en fructosa. Thomas, C.Y. IDRC-244s, 147 pp.

Évaluation de l'effet sur la santé : approvisionnement en eau, assainissement et hygiène. Briscoe, J., Feachem, R.G., Rahaman, M.M. IDRC-248f, 84 pp.

Evaluando el impacto en salud: agua, saneamiento y educación sanitaria. Briscoe, J., Feachem, R.G., Rahaman, M.M. IDRC-248s, 84 pp.

Market research for food products and processes in developing countries: proceedings of a workshop held in Singapore, 1-4 April 1986. Young, R.H., MacCormac, C.W., ed. IDRC-249e, xii + 144 pp.

L'enseignement aux enfants démunis : une étude ethnographique en Amérique latine. Avalos, B., réd. IDRC-253f, 193 pp.

Solar drying in Africa: proceedings of a workshop held in Dakar, Sénégal, 21-24 July 1986. Bassey, M.W., Schmidt, O.G., ed. IDRC-255e, ix + 286 pp.

Le séchage solaire en Afrique : compte rendu du colloque tenu à Dakar, Sénégal, du 21 au 24 juillet 1986. Bassey, M.W., Schmidt, O.G., réd. IDRC-255f, ix + 306 pp.

Búsqueda — CIID 1986: socios en la innovación. IDRC-257s, 47 pp.

Tropical root crops: root crops and the African food crisis — proceedings of the third triennial

symposium of the International Society for Tropical Root Crops — Africa Branch held in Owerri, Nigeria, 17-23 August 1986. Terry, E.R., Akoroda, M.O., Arene, O.B., ed. IDRC-258e, ix + 197 pp.

Child health and mortality in sub-Saharan Africa: an annotated bibliography from the 1975-86 literature/Santé et mortalité infantiles en Afrique subsaharienne : bibliographie annotée de la documentation de 1975 à 1986. Mackenzie, F., comp. IDRC-259e,f, x + 223 pp.

Searching — IDRC 1987: research in small countries. IDRC-263e, 36 pp.

Quête d'avenirs — CRDI 1987 : la recherche dans les petits pays. IDRC-263f, 40 pp.

Maderas tropicales como material de construcción en los países del Grupo Andino de América del Sur. Keenan, F.J., Tejada, M. IDRC-TS49s, 147 pp.

Relations universitaires du Canada avec la République populaire de Chine depuis 1970 — volume 2 : échanges des universités canadiennes avec la Chine. Singer, M. IDRC-TS54f, xi + 119-568 pp.

Technology transfer and nationalization in Ghana. Adei, S. IDRC-TS55e, xiii + 114 pp.

Mortality and morbidity: the Matlab experience. D'Souza, S., Bhuiya, A., Zimicki, S., Sheikh, K. IDRC-TS56e, 60 pp.

Efecto del descenso de la fecundidad en la mortalidad infantil. Taucher, E. IDRC-TS57s, viii + 56 pp.

Urban energy in Fiji: a survey of Suva's household, industrial, and commercial sectors. Siwatibau, S. IDRC-TS59e, xii + 72 pp.

MINISIS user's group meeting 1986: proceedings of the eighth annual meeting/Réunion du groupe des utilisateurs de MINISIS 1986 : compte rendu de la huitième réunion. IDRC-MR148e,f, viii + 243 pp.

Research priorities for African aquaculture — report of a workshop held in Dakar, Sénégal, October 13-16, 1986. Powles, H., ed. IDRC-MR149e, iv + 172 pp.

Les priorités pour la recherche aquicole en Afrique : compte rendu d'un atelier tenu à Dakar, Sénégal, du 13 au 16 octobre 1986. Powles, H., réd. IDRC-MR149f, iv + 182 pp.

Seminar on the participation of women in water supply and sanitation programs. Zandstra, I., ed. IDRC-MR150e, iv + 72 pp.

Market research methods. West, S.J., Earl, M.D. IDRC-MR151e, 58 pp.

Review of issues and research relating to improved cookstoves. Krugmann, H. IDRC-MR152e, ii + 30 pp.

Oil crops: niger and rapeseed/mustard — proceedings of the third oil crops network workshop held in Addis Ababa, Ethiopia, 6-10 October 1986. Omran, A., ed. IDRC-MR153e, ix + 250 pp.

Canada-Latin America annotated development index: a directory of Canadian organizations working in education/social sciences and Latin American development. Litzgus, J. IDRC-MR154e, iv + 120 pp.

Developing countries and general equilibrium models: a review of the empirical literature. Decaluwé, B., Martens, A. IDRC-MR155e, iv + 104 pp.

TANIT 83: a general equilibrium model for analyzing the customs duties, quotas, and price controls of the Tunisian economy. Bousselmi, N., Decaluwé, B., Ennaifar, A., Monette, M. IDRC-MR156e, iv + 39 pp.

Bean network: proceedings of the second workshop held at Antigua, Guatemala, 1-7 June 1986. Elias, L.G., Edwardson, W., ed. IDRC-MR157e, ii + 260 pp.

Increase of productivity in public administration: the role of information technologies — proceedings of the international meeting held in Dakar, Sénégal, 16-21 June 1986/Accroître la productivité de l'administration publique : le rôle des techniques de l'information — actes de la conférence internationale tenue à Dakar, Sénégal, du 16 au 21 juin 1986. IDRC-MR158e,f, 349 pp.

IDRC handpump network: proceedings of the meeting held in Bangkok, Thailand, 1-3 October 1986. Almario, E.S., ed. IDRC-MR159e, iv + 156 pp.

External funding of development-related research: a survey of some major donors. Lewis, J.P. IDRC-MR160e, vii + 68 pp.

Aide extérieure à la recherche pour le développement : étude de quelques grands organismes d'aide. Lewis, J.P. IDRC-MR160f, viii + 81 pp.

Information technology and education: implications for theory, research, and practice. Papagiannis, G., Douglas, C., Williamson, N., Le Mon, R. IDRC-MR161e, iv + 101 pp.

Economic evaluation and diffusion of renewable energy technologies: case studies from India. Bhatia, R. IDRC-MR162e, iv + 85 pp.

Le haie vive : un modèle d'intégration de l'arbre au système d'exploitation agricole et pastoral. Hien, F., Zigani, G. IDRC-MR163f, iii + 60 pp.

Cage culture research projects: report of a workshop held in Cairo, Egypt, 23-26 October 1985/Projets de recherche sur la pisciculture en cages : compte rendu d'un atelier tenu au Caire, Égypte, du 23 au 26 octobre 1985. Powles, H., ed. IDRC-MR164e,f, v + 182 pp.

Animal feed resources for small-scale livestock producers: proceedings of the second Pastures Network for Eastern and Southern Africa (PANESA) workshop held at the International Laboratory for Research on Animal Diseases, Kabete, Nairobi, Kenya, 11-15 November 1985. Kategile, J.A., Said, A.N., Dzowela, B.H., ed. IDRC-MR165e, iv + 271 pp.

Economic adjustment and long-term development in Uganda. The Uganda Study Team. IDRC-MR166e, xvi + 143 pp.

Estado del arte de la educación indígena en el área andina de América latina. Yáñez Cossio, C. IDRC-MR167s, v + 113 pp.

Oil crops — the Brassica subnetwork: proceedings of the first meeting of the Brassica subnetwork held in Uppsala, Sweden, 7-9 May 1987. Omran, A., ed. IDRC-MR168e, vi + 80 pp.

Lever-operated knapsack and hand-held sprayers used in agriculture in developing countries: a review of their safety and efficacy. Zandstra, I. IDRC-MR169e, iii + 104 pp.

The red soils of East and Southern Africa: proceedings of an international symposium, Harare, Zimbabwe, 24-27 February 1986. Nyamapfene, K., Hussein, J., Asumadu, K., ed. IDRC-MR170e, vii + 498 pp.

Small millets — recommendations for a network: proceedings of the Small Millets Steering Committee meeting, Addis Ababa, Ethiopia, 7-9 October 1987. IDRC-MR171e, vii + 75 pp.

Farming systems research in West Africa: proceedings of the West African Farming Systems Research Network workshop, Dakar, Sénégal, 10-14 March 1986. Abalu, G.O.I., Mutsaers, H., Faye, J., ed. IDRC-MR172e, iv + 119 pp.

Agroforestería tropical: suplemento bibliográfico no. 1. Monge, C., comp. IDRC-MR173s, 145 pp.

A compendium of energy sources for Tanzania. Mwandosya, M.J., Luhanga, M.L. IDRC-MR176e, iv + 107 pp.

Publications and texts by Centre staff

Bassey, M.W. [1988.] Drying needs: the Sierra Leonean farmers' perception. Paper presented at the

- International Colloquium on Cereals in Warm Regions: Conservation and Processing, Ngaoundere, 22-27 February 1988. IDRC, Dakar. Mimeo, 12 pp.
- _____. 1987. Solar energy systems for rural development. Paper presented at the National Solar Energy Forum for 1987, Lagos, Nigeria, 22-25 April 1987. IDRC, Dakar. Mimeo, 11 pp.
- Daniels, W.D. 1987. Choosing input indicators for research managers. *Scientometrics*, 11(1-2), 17-25.
- Daniels, W.D., Young, A.M. 1987. Approaches to research donor evaluations: a review of the issues. Paper presented at the Research Donor's Group Meeting, Canberra, 10-11 December 1987. IDRC, Ottawa, Ont. Mimeo, 17 pp.
- Davy, F.B. 1987. Framework for aquaculture research under the CGIAR. Paper presented at the Consultative Group on International Agricultural Research Technical Advisory Committee 42nd Meeting, Roma, 16-24 March 1987. IDRC, Singapore. Mimeo, 26 pp.
- de Padua, D. 1987. Grain drying systems: R and D priorities. Paper presented at the ASEAN Food Handling Bureau Consultation Workshop, Bangkok, 24-27 February 1987. IDRC, Singapore. Mimeo, 6 pp.
- Devendra, C. 1987. Feed resources and their relevance in feeding systems in developing countries. Paper presented at the 4th World Conference on Goat Production, Brasilia, 8-13 March 1987. IDRC, Singapore. Mimeo, 26 pp.
- _____. 1987. Flock management in integrated village systems. Paper presented at the 4th World Conference on Goat Production, Brasilia, 8-13 March 1987. IDRC, Singapore. Mimeo, 20 pp.
- _____. 1987. Goats. In *Bioclimatology and the adaptation of livestock*. Elsevier, Amsterdam, the Netherlands. 157-168.
- _____. 1987. Relevance of on-farm animal production research in Asia. In *On-farm animal research: extension and its economic analysis*. Winrock International Institute for Agricultural Development, Morrilton, AR, USA. 13-18.
- _____. 1987. Role of goats in food production systems in industrialised and developing countries. Paper presented at the 4th World Conference on Goat Production, Brasilia, 8-13 March 1987. IDRC, Singapore. Mimeo, 38 pp.
- _____. 1987. Strategies for the effective utilisation of small ruminants and feed resources in the highlands of Asia. Paper presented at the International Centre for Integrated Mountain Development Expert Panel Meeting, Kathmandu, 25-29 May 1987. IDRC, Singapore. 33 pp.
- Devendra, C., Trung, T. Le. [1987.] Options for increasing the utilization of cereal straws. IDRC, Singapore. Mimeo, 40 pp.
- Forget, G. 1987. Projects supported by the International Development Research Centre (IDRC) in developing countries: pesticides and health. In *Proceedings of the Regional ILO Finnish Symposium on Occupational Health and Safety in East Africa*, Marangu, Tanzania, 24-28 November 1986. International Labour Organisation, Helsinki, Finland. 10-12.
- Glover, D.J. [1987.] Industrial policy research in Latin America. IDRC, Ottawa, Ont. Mimeo, 13 pp.
- _____. 1987. Increasing the benefits to smallholders from contract farming: problems for farmers' organizations and policy makers. *World Development*, 15(4), 441-448.
- Head, I.L. 1987. Resolving global problems into the 21st Century: how can science help? — notes for remarks to the Student Pugwash National Conference, Ottawa, Ontario, 12 June 1987. IDRC, Ottawa, Ont. Mimeo, 30 pp.
- _____. 1987. Remarks to the University of the West Indies Graduation Ceremony, Mona, Jamaica, 28 November 1987. IDRC, Ottawa, Ont. Mimeo, 15 pp.
- _____. 1987. World population jumps to five billion. IDRC, Ottawa, Ont. Media Tapes and Transcripts, 12 pp.
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Entreprendre une recherche à Haïti et au Bénin sur l'auto-développement au sein de projets d'aide internationale de l'Agence canadienne de développement international en vue d'obtenir une maîtrise en sociologie; Assemblée spirituelle nationale des Bahais d'Haïti, Port-au-Prince, Haïti

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Formation en planification des communications; Programme des Nations Unies pour le développement, formation en développement et planification des communications, Bangkok, Thaïlande

Kimani, John (Kenya)
Cours de formation en planification de l'énergie rurale; Technische Hogeschool Twente, Enschede, Pays-Bas

Krawczyk, Nora (Argentine)
Etudes en vue de l'obtention d'un doctorat en éducation; Universidade Estadual de Campinas, São Paulo, Brésil

Larrea, Carlos (Equateur)
Etudes en vue de l'obtention d'un doctorat sur la pensée sociale et politique; Faculté des études

Bourses accordées dans le cadre de programmes

Département d'économie agricole, Université de la Saskatchewan, Saskatoon, Saskatchewan, Canada

Achacha, John (Kenya)

Recherche sur la formation au fonctionnement du décorrtiqueur ; Rural Industries Innovation Centre, Gaborone, Botswana

Alarcon, Angelica (Guatemala)

Etudes en vue de l'obtention d'un diplôme de maîtres en sociologie; Confederación Universitaria Centroamericana, Universidad de Costa Rica, San José, Costa Rica

Anon, Manmontri (Thaïlande)

Etudes en vue de l'obtention d'une maîtrise en épidémiologie clinique; Département d'épidémiologie clinique et de biostatistiques, Université McMaster, Hamilton, Ontario, Canada

Aguino, Luis A. (El Salvador)

Etudes en vue de l'obtention d'une maîtrise en sociologie; Confederación Universitaria Centroamericana, Universidad de Costa Rica, San José, Costa Rica

Bah, Mamadou (Sénégal)

Etudes en vue d'obtenir une maîtrise en bibliothéconomie et sciences de l'information; Ecole de bibliothéconomie et sciences de l'information, Université de Montréal, Montréal, Québec, Canada

Banda, Elizabeth E. (Malawi)

Etudes en vue de l'obtention d'un doctorat en sciences infirmières; Maryland University, Baltimore, MD, E.-U.

Barrera, Rafael A. (El Salvador)

Etudes en vue de l'obtention d'une maîtrise en sociologie; Confederación Universitaria Centroamericana, Universidad de Costa Rica, San José, Costa Rica

Beltrand, Olga R. (Uruguay)

Entreprendre une maîtrise en sociologie; Centro de Investigaciones y Estudios del Uruguay, Departamento de sociología, Instituto Universitaria de Pesquisas do Rio de Janeiro, Rio de Janeiro, Brésil

Boyce, Stephen Leo (Barbade)

Etudes en vue de l'obtention d'une maîtrise en biologie du poisson; Département de biologie, Université des Indes occidentales, Bridgetown, Barbade

Cai-Yao, Yuan (Chine)

Formation en production des légumes; Asian Vegetable Research and Development Center, Bangkok, Thaïlande

Camará, Iaiá (Guinée-Bissau)

Formation technique, travaux pratiques et visites à d'autres centres de documentation en information;

Centro de Informação e Documentação Amílcar

Diallo, Anis (Sénégal)

Formation en recherche en aquaculture; Auburn University, Auburn, AL, E.-U.

Dottin, Milagros (Dominique)

Etudes en vue de l'obtention d'une maîtrise en démographie; Centro de Estudios Demográficos y de Desarrollo Urbano, Colegio de México, Mexico, Mexique

Dumangane, Adélia Sansão (Mozambique)

Formation technique, travaux pratiques et visites à d'autres centres de documentation en information; Centro de Informação e Documentação Amílcar Cabral, Lisbonne, Portugal

Filmus, Daniel Fernando (Argentine)

Etudes en vue de l'obtention d'une maîtrise en éducation; Universidade Federal Fluminense, Niterói, Brésil

García-Vela, Luis A. (Guatemala)

Etudes en vue de l'obtention d'une maîtrise en sciences des aliments; Université de Guelph, Guelph, Ontario, Canada

Gasarasi, Charles P. (Tanzanie)

Recherche de doctorat sur le terrain sur les effets des exilés et des réfugiés africains sur les relations entre les Etats africains; Department of Political Science, Tulane University, New Orleans, MS, E.-U.

Ghani, Zainal (Malaisie)

Etudes de doctorat en éducation; University of Southampton, Southampton, Hants, R.-U.

Gnom, Aly (Sénégal)

Recherches en gynécologie-obstétrique; Service de gynécologie-obstétrique, Maternité de la Belle de Mai, Marseille, France

Godínez, Caroline (Guatemala)

Etudes en vue de l'obtention d'une maîtrise en aliments et nutrition; Faculté d'études supérieures, Université du Manitoba, Winnipeg, Manitoba, Canada

Goh, Sing Yau (Malaisie)

phénomènes de circulation des liquides simulés par ordinateur; Imperial College, Londres, R.-U.

González, Emilio P. (Nicaragua)

Etudes en vue de l'obtention d'une maîtrise en sociologie; Confederación Universitaria Centroamericana, Universidad de Costa Rica, San José, Costa Rica

Guisado, Chita (Chili)

Etudes en vue de l'obtention d'une maîtrise en épidémiologie et en biostatistiques; Département

Bourses

Bourses Pearson

Les boursiers sont inscrits à l'Université d'Ottawa et à l'Université Carleton à un programme d'études en administration publique qui n'est pas sanctionné par un diplôme et qui comporte un stage dans un ministère.

Anassi, Abdelkhalak (Maroc)

Brito, Maria Cecilia Wey de (Brésil)

Fadaq, Mohammed Ahmed (Yémen)

Issar, Ranjit (Inde)

Kikala, Philip (Papouasie-Nouvelle-Guinée)

Luengo, Oscar Humberto (Chili)

Mivuba, Antime (Burundi)

Mkondwa, George C. (Malawi)

Mukuna, Ka Mukuna Longola (Zaire)

Ouedraogo, Marceline (Burkina Faso)

Palomino Gamarra, Maria Teresa (Pérou)

Paramawithana, Upul (Sri Lanka)

Picar Jimenez, Gloria (Philippines)

Raja Kamarudin, Bin Raja Ahmad (Malaisie)

Salia, Edward K. (Ghana)

Sandhu, Deepak (Inde)

Sigiliano, Ernesto de Campos (Brésil)

Bourses accordées dans le cadre de projets

Abagi, Jared O. (Kenya)

Études de doctorat en sociologie éducationnelle; Conseil de recherches en sciences humaines du

Canada, Université McGill, Montréal, Québec.

Buelna, Geraldo (Mexique)

Formation pratique dans le domaine des

biotechnologies et des procédés avancés de traitement et de récupération des eaux usées; Pig and Poultry Research Training Institute, Singapour

Jeng, Momodou (Gambie)

Doctorat en démographie sociale; Département de sociologie, Université Western Ontario, London.

Ontario, Canada

Kabbah, Shecou-Bah (Sierra Leone)

Maîtrise en approvisionnement en eau et

assainissement; Water and Engineering for Developing Countries, Loughborough University of

Technology, Loughborough, Leics., R.-U.

Makambila, Casimir (Congo)

Thèse de doctorat en microbiologie; Laboratoire de microbiologie, Université de Clermont FD II, France

Mosimanyana, Bernard M. (Botswana)

Études de doctorat en zootechnie; Faculté des

études supérieures, Université de Guelph, Guelph,

Ontario, Canada

Mpemi, Malijeng Theresia (Lesotho)

Maîtrise en économie agricole; Université de la

Saskatchewan, Saskatoon, Saskatchewan, Canada

Musi, Mahlape (Lesotho)

Maîtrise en éducation; Université Queen, Kingston,

Ontario, Canada

Mwangi, Joel G. (Kenya)

Formation dans le domaine des perfectionnements

récents de la culture tissulaire dans la production et

la gestion des cultures; Bath, Avon, R.-U.

Njiru, Daniel M. (Kenya)

Maîtrise en agroforesterie; Université de Nairobi,

Nairobi, Kenya

Peng, Chun (Chine)

Études de doctorat en physiologie du poisson;

Département de zoologie, Université de l'Alberta,

Edmonton, Alberta, Canada

Sall, Oumar (Mauritanie)

Formation en pisciculture; Centre de formation

piscicole, Bouaké, Côte d'Ivoire

Sheikh, Omar Mohamed (Somalie)

Formation au niveau de la maîtrise en sélection et

génétique des plantes; Tamil Nadu Agricultural

University, Coimbatore, Inde

Sogue, Ousmane (Sénégal)

Entreprendre des études en vue d'obtenir une

maîtrise en urbanisme; Université de Montréal,

Montréal, Québec, Canada

Sopen, Lympho (Lesotho)

Entreprendre une maîtrise en économie agricole;

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87-1042 L'enseignement en Chine (Chine-Canada) — Phase III

East China Normal University, Shanghai, Université de Victoria. Examiner les programmes, les ouvrages didactiques, les méthodes d'enseignement en classe, les méthodes d'administration et d'évaluation internes des écoles moyennes en Chine et formuler des recommandations quant aux réformes possibles. 205 950 \$ — 27 mois.

87-1053 Organisations de participation communautaire en Amérique centrale et dans les Antilles

Centro de Estudios Sobre América, Cuba, Université des Indes occidentales, Kingston, Université York, Canada. Permettre à l'Institut of Social and Economic Research, au Centre for Research on Latin America and the Caribbean, et au Centro de Estudios Sobre América de faire une analyse comparée du rôle actuel et potentiel des organisations de participation communautaire comme structures capables de démocratiser la formulation et l'implantation de politiques publiques en Jamaïque, à Cuba, au Nicaragua et au Costa Rica. 131 370 \$ — 24 mois.

Projets préliminaires des divisions

Outre les activités énumérées dans les pages précédentes, le CRDI subventionne de nombreux projets, relativement modestes, pour appuyer d'une façon ou d'une autre les activités en cours des divisions. Il peut s'agir, par exemple, d'ateliers ou de séminaires sur les priorités de la recherche dans une région ou dans un domaine particulier, de permettre à des chercheurs de pays en développement de participer à des réunions d'experts dans différentes parties du monde ou, encore, de donner l'occasion à un spécialiste de visiter et secondar l'équipe d'un projet dans un autre pays.

- La plupart des projets préliminaires couvrent les coûts de réunions ou de consultations qui sont, directement ou indirectement, reliées aux recherches financées par le CRDI. Au cours de l'année financière précédente, le CRDI a approuvé des projets préliminaires au coût total de 6 227 000 \$. En voici quelques exemples :
- Un institut agricole thaïlandais a mis la dernière main à un dictionnaire agricole anglais-thaï comprenant 600 000 mots.
 - Des chercheurs de plusieurs pays d'Amérique latine et des Antilles se sont réunis pour explorer des moyens d'améliorer les conditions des petits producteurs caféiers.
 - Quinze chercheurs se sont donné rendez-vous pour mettre sur pied un réseau d'échange sur les systèmes culturels dans les Antilles.
 - Un consultant a fait une tournée en Inde pour étudier les groupes d'éducation populaire impliqués dans le développement communautaire.
 - Une conférence internationale sur la leishmaniose, une maladie tropicale, a été tenue à Ottawa, en juin. Elle a réuni plus de cinquante participants.
 - Un consultant a aidé les représentants ougandais à dégager des options constitutionnelles.
 - À Manille, en janvier, un atelier international sur le rôle des femmes dans la prestation des services en eau et l'hygiène a été tenu.
 - Trente personnes ont participé à un atelier de formation sur l'édition savante dans les Caraïbes.
 - Un hydro-géologue canadien a visité le Burkina Faso pour préparer un projet en collaboration.
 - Un groupe d'étude a analysé les politiques de lutte à la sécheresse en Afrique pour réviser les efforts des intervenants en la matière.

87-0313 Etablissements représentatifs et politiques sociales (Argentine)
Centro Latinoamericano para el Analisis de la Democracia, Buenos Aires. Analyser et définir le lien qui existe entre l'Etat, les partis politiques, les syndicats et les associations commerciales et étudier leur rôle dans l'élaboration de politiques sociales et leur application. 82 720 \$ — 18 mois.

87-0314 Diffusion de meilleurs fourreaux à combustible issu de la biomasse (Chine)
Université Tsinghua, Beijing. Permettre à l'institute for Techno Economic and Energy Systems Analysis d'analyser et d'évaluer le système de conception et de diffusion de fourreaux améliorés à l'échelle nationale. 84 370 \$ — 24 mois.

87-0316 Etude de la politique scientifique et technologie de la Colombie (Colombie)
Fondo Colombiano de Investigaciones Científicas y Proyectos Especiales Francisco José de Caldas, Bogotá. Etudier la politique scientifique et technologique colombienne actuelle et recommander un nouveau plan à long terme pour le pays. 103 630 \$ — 18 mois.

87-0321 Le rôle des médias dans l'éducation non institutionnalisée (Argentine)
Centro de Estado y Sociedad, Buenos Aires. Décrire et analyser la relation entre les besoins en éducation et la demande des populations des secteurs démunis et le rôle éducatif des médias désormais soumis aux nouvelles politiques du gouvernement. 101 250 \$ — 22 mois.

87-0322 Discrimination sociale et éducation au Pérou
Pontificia Universidad Católica del Perú, Lima. Permettre à sa Faculté des sciences sociales d'identifier les mécanismes actuels de discrimination fondée sur l'appartenance ethnique, le sexe ou le travail au sein du système d'enseignement afin de les contrer et de contribuer à la création d'un milieu démocratique dans la communauté de l'enseignement. 86 100 \$ — 18 mois.

87-0326 Les femmes, le marché du travail et la crise économique (République dominicaine)
Centro de Investigación para la Acción Femenina, Santo Domingo. Recueillir des données sur les conditions de vie et de travail des citadines en République dominicaine et sur les caractéristiques de leur participation économique et sociale. 86 990 \$ — 24 mois.

87-0330 Accès à la propriété foncière (Kenya)
Centre international sur la physiologie et l'écologie des insectes, Nairobi. Faire comprendre les facteurs déterminant l'accès des femmes à la propriété foncière et montrer comment ces facteurs influent sur le rôle des femmes dans les ménages agricoles et la gestion de la production agricole. 46 820 \$ — 24 mois.

87-0332 Exode des femmes au Mali : ses conséquences
Institut des sciences humaines, Bamako. Cerner les conséquences sociales, économiques et culturelles de l'exode féminin vers les régions urbaines afin d'aider les associations féminines des zones urbaines et rurales à faire de la migration une expérience positive. 75 700 \$ — 24 mois.

87-0337 Les femmes et la pauvreté urbaine (Inde)
Society for the Promotion of Area Resource Centres, Bombay. Recueillir des informations sur les conditions de vie des pauvres des régions urbaines, particulièrement sur les femmes, de telle sorte que les collectivités locales, de même que les praticiens d'autres régions puissent les utiliser. 149 290 \$ — 36 mois.

87-0340 Migration de la main-d'œuvre et politiques d'emploi (Venezuela)
Ministerio del Trabajo, Caracas. Permettre à l'Instituto de Investigaciones Económicas y Sociales de l'Universidad Católica Andrés Bello d'étudier la migration, l'emploi et les besoins en formation chez la main-d'œuvre industrielle dans deux districts frontaliers. 15 000 \$ — 8 mois.

87-0344 Réseau de recherche sur le rôle des sexes (Tanzanie)
Eastern and Southern African Management Institute (ESAMI), Arusha. Accorder des subventions à ceux qui participent à des séminaires sur la méthodologie de recherche afin qu'ils puissent mettre en oeuvre les projets de recherche touchant les femmes et le développement ; et encourager la création d'un réseau de personnes intéressées à faire de la recherche sur les questions liées aux femmes et au développement. 227 480 \$ — 24 mois.

87-1013 Investissement canadien à l'étranger par le biais des petites et moyennes entreprises (Argentine-Canada)
Université du Québec, Montréal. Permettre au Centro de Estudios de Desarrollo y Relaciones Económicas Internacionales, Buenos Aires, en collaboration avec le Centre de recherche en développement industriel et technologique, Montréal, d'analyser empiriquement le rendement et l'effet du transfert de technologie par un groupe de petites et moyennes entreprises canadiennes. 63 240 \$ — 12 mois.

87-1038 Interaction enseignant - élève et rendement scolaire (Inde-Canada)
Educational Research Foundation, Pune, et Université de l'Alberta, Edmonton. Présenter à un groupe de chercheurs de l'Inde des méthodes de recherche ethnographique qui complètent et intègrent d'autres méthodes de recherche éducationnelle (étude de cas, de comportement, et étude qualitative, expérimentale et quasi expérimentale). 77 450 \$ — 10 mois.

principalement de l'enquête nationale sur la fécondité. 89 800 \$ — 24 mois.

87-0279 Programme national de l'alcool : ses conséquences et son rôle dans le

contexte énergétique (Brésil)
Universidade Federal do Rio de Janeiro. Évaluer le Programme national brésilien sur les combustibles face à la baisse récente des prix internationaux du pétrole et à l'augmentation de la production nationale afin de formuler des recommandations de politique concernant le rôle du programme au sein du système énergétique du pays. 187 040 \$ — 30 mois.

87-0280 Caractéristiques de l'emploi et politiques sociales dans le secteur public (Argentine)

Centro de Estudios de Estado y Sociedad, Buenos Aires. Étudier l'emploi des femmes dans le secteur public de l'Argentine. 71 720 \$ — 18 mois.

87-0283 Secteur des très petites et petites entreprises (Costa Rica)

Universidad Nacional. Heredia. Permettre à l'Instituto de Estudios Sociales en Población d'évaluer les caractéristiques et le rôle socioéconomique des très petites et petites entreprises dans le développement national et déterminer les mesures institutionnelles afin d'accélérer leur développement. 74 300 \$ — 15 mois.

87-0284 Éducation et développement des coopératives en Amérique latine — Phase II

Consejo de Educación de Adultos de America Latina, Chili. Examiner les facteurs organisationnels, structurels et socioéconomiques qui influent sur le développement, la pratique et les effets de l'enseignement au sein des coopératives. 89 800 \$ — 22 mois.

87-0289 Économie politique et stabilisation (Turquie)

Turkish Social Science Association, Ankara. Évaluer les effets des politiques d'ajustement structural sur la classe ouvrière et la paysannerie turques. 18 600 \$ — 12 mois.

87-0295 Envois de fonds des migrants (Bangladesh)

Bangladesh Institute of Development Studies, Dacca. Étudier la migration de la main-d'œuvre vers le Moyen-Orient afin d'évaluer les effets de l'exode de la main-d'œuvre qualifiée, ainsi que les façons d'utiliser efficacement les envois de devises des migrants. 41 190 \$ — 12 mois.

87-0298 Impact de l'exploitation minière sur la condition socioéconomique des femmes (Inde)

Institute of Social Studies Trust, New Delhi. Évaluer en détail les coûts et les avantages de l'exploitation minière dans le Kumaon, région du centre-est de l'Himalaya indien, en examinant d'abord l'effet de cette exploitation sur les moyens d'existence des femmes. 87 370 \$ — 24 mois.

87-0299 Étude régionale de l'enseignement technique et professionnel (Amérique latine)

Banque mondiale, États-Unis. Permettre au Centro Interamericano de Investigación y Documentación sobre la Formación Profesional de mener une étude détaillée de l'histoire, de l'évolution et du fonctionnement actuel des systèmes d'enseignement technique et professionnel en Amérique latine. 43 420 \$ — 12 mois.

87-0301 Effet du changement social et économique sur les femmes dans la région de la lagune Ada Congor (Ghana)

Université du Ghana, Legon. Permettre à l'Institut des Études africaines d'étudier les effets du changement social et économique sur les femmes de la région du lagon, tant au chapitre de la reproduction que de la productivité. 17 890 \$ — 9 mois.

87-0302 Enseignants ruraux et efficacité des écoles (Chili)

Facultad Latinoamericana de Ciencias Sociales, Santiago. Étudier le profil des enseignants ruraux et leur formation antérieure par rapport à leurs habitudes d'enseignement et l'apprentissage des élèves. 57 350 \$ — 16 mois.

87-0307 Troisième âge et services sociaux (Colombie)

Corporación Centro Regional de Población, Bogotá. Produire des documents d'information et établir une méthodologie afin de créer et d'implanter une politique nationale sur le troisième âge fondée sur l'analyse des interrelations entre le vieillissement de la population et le développement du pays. 72 950 \$ — 14 mois.

87-0310 Participation et gouvernement local (Chili)

Facultad Latinoamericana de Ciencias Sociales, Santiago. Mener une étude approfondie des politiques et programmes du gouvernement qui s'adressent aux plus pauvres, ainsi que des interventions sociales des organisations non gouvernementales dans la métropole de Santiago. 82 870 \$ — 24 mois.

87-0311 Établissements représentatifs et politiques sociales (Uruguay)

FEITHO - Sociedad de Análisis Político, Montevideo. Analyser les facteurs politiques et bureaucratiques qui influent sur la formulation et l'application des politiques sociales au niveau de l'administration municipale de Montevideo. 74 130 \$ — 15 mois.

87-0312 Les organisations non gouvernementales et les politiques gouvernementales (Inde)

Society for Participating Research in Asia, New Delhi. Définir la participation actuelle et potentielle des ONG comme promotrices du développement ayant un rôle à jouer dans la décision et l'application de politiques et mécanismes de rassemblement des demandes populaires. 70 480 \$ — 24 mois.

87-0181 Programme d'études supérieures en collaboration (Antilles) — Phase III
Universités des Indes occidentales, Jamaïque. Appuyer le programme d'études supérieures en finançant quinze bourses d'étude, six au niveau de la maîtrise et neuf au niveau de la maîtrise ou du doctorat. 76 200 \$ — 12 mois.

87-0183 Surmonter la crise économique (Barbade)
Université des Indes occidentales, Bridgetown. Permettre à l'Institut de recherche sociale et

économique de produire des informations axées sur une politique qui pourrait améliorer l'efficacité des stratégies d'ajustement et, en même temps, réduire l'impact des récessions sur les femmes à faible revenu et leur famille. 55 610 \$ — 18 mois.

87-0202 Balance des paiements, épargnes et investissements (Colombie) — Phase III

Fundación para la Educación Superior y el Desarrollo, Bogotá. Étudier la relation entre les variables financières et la production, la consommation, l'investissement, l'emploi et la balance des paiements dans l'économie colombienne. 128 600 \$ — 24 mois.

87-0207 Programme régional de consultation et d'examen de la recherche en éducation (Asie du Sud-Est) — Phase II

Groupe de consultation et d'examen de la recherche en éducation de l'Asie du Sud-Est, Malaisie. Maintenir et renforcer les réseaux entre les chercheurs en éducation, les décideurs et les praticiens dans les pays de l'Association des nations du Vase du Sud-Est (ANASE). 304 000 \$ — 36 mois.

87-0208 Étude des intervalles génésiques (Inde) — Phase III

National Council of Applied Economic Research, New Delhi. Déterminer les facteurs de fécondité, de mortalité et de santé en Inde. 185 300 \$ — 36 mois.

87-0210 Petites entreprises dans le domaine de l'aluminium (Ghana)

National Service Secretariat, Accra. Permettre à l'Université du Ghana d'étudier les petites usines de fabrication d'aluminium dans les régions urbaines et rurales du Ghana et, en particulier, les technologies utilisées et les possibilités d'emploi. 150 710 \$ — 24 mois.

87-0213 Examen des établissements scientifiques et de la politique scientifique en Inde

Centre for the Study of Developing Societies, New Delhi. Étudier le développement des établissements et de l'infrastructure scientifiques en Inde. 84 360 \$ — 30 mois.

87-0215 Changements dans la fécondité en Asie du Sud-Est

Upcon Foundation, Philippines. Définir et mesurer les effets de la croissance économique et du développement socio-économique sur la fécondité et

87-0219 Déterminants du risque de diarrhée, Mindanao (Philippines)
Xavier University, Cagayan de Oro City. Permettre à l'Institut de recherche pour la culture de Mindanao de faire de la recherche anthropologique interdisciplinaire pour évaluer les facteurs de risque liés à la maladie, à Mindanao. 16 300 \$ — 12 mois.

87-0220 Politique industrielle (Équateur) — Phase II

Centro de Planificación y Estudios Sociales, Quito. Examiner les effets des politiques gouvernementales sur l'expansion industrielle. 162 630 \$ — 24 mois.

87-0251 Gouvernements locaux dans les villes intermédiaires (Amérique latine)

SIUR-Documentación, Estudios, Educación, Chili. Analyser la capacité des communes de quelques villes intermédiaires en Argentine, en Bolivie, au Brésil, en Colombie, au Chili, en Équateur et au Pérou, de répondre aux nécessités de la population, particulièrement celle dont les revenus sont les plus faibles. 440 000 \$ — 24 mois.

87-0259 Milieu familial et capacités d'apprentissage des enfants (Chili)

Centro de Estudios y Atención del Niño y la Mujer, Santiago. Identifier les facteurs sociaux et familiaux associés au rendement scolaire peu élevé des enfants d'âge préscolaire, et mettre au point une stratégie d'intervention afin de favoriser l'interaction familiale. 50 000 \$ — 18 mois.

87-0265 L'alphabétisation par l'école et les collectivités (Ouganda)

Institut d'enseignement pédagogique, Kampala. Canaliser les efforts de l'école et de la collectivité afin de promouvoir l'alphabétisation et améliorer ainsi la qualité de la vie à l'école et dans la collectivité. 157 000 \$ — 24 mois.

87-0268 Recherche qualitative et formation en éducation extra-scolaire (Thaïlande)

Ministère de l'Éducation, Bangkok. Permettre à son Département d'éducation extra-scolaire de développer, chez des enseignants dans ce domaine, la capacité de recueillir et de valider des données et de les utiliser aux fins de la planification et de la gestion. 95 000 \$ — 30 mois.

87-0273 Appauvrissement mondial et développement durable (Argentine-Canada)

Fondation Bantloche, Argentine, Université de Colombie-Britannique, Vancouver. Examiner les concepts et les mécanismes liés à l'appauvrissement et à la dégradation de l'environnement dans le monde. 53 640 \$ — 6 mois.

87-0276 Fécondité chez les adolescentes (Nigeria)

Bureau national de la population, Lagos. Analyser la fécondité chez les adolescentes à partir

entre les chercheurs aux niveaux national, régional et international. 375 000 \$ — 24 mois.

87-0129 Analyse de la politique économique (Chili) — Phase II

Corporación de Investigaciones Económicas para Latinoamérica, Santiago. Analyser une stratégie et des politiques pour affronter les problèmes à court et à long terme de l'Amérique latine. 519 620 \$ — 24 mois.

87-0139 Agriculture sous contrat (Asie du Sud-Est)

Thai University Research Association, ministère de l'Agriculture, Indonésie, Université de Malaisie. Evaluer l'expérience d'agriculture à contrat réalisée dans certains pays, particulièrement en ce qui a trait au bien-être du petit paysan et à la politique de développement agricole. 247 750 \$ — 24 mois.

87-0140 Négociation du calendrier d'amortissement de la dette (Global) — Phase II

Alternativas de Desarrollo, Costa Rica. Examiner les conséquences de la conditionnalité réciproque et de la réglementation bancaire sur la gestion de la dette des pays moins développés. 155 500 \$ — 24 mois.

87-0142 Ajustements de la balance des paiements (Pérou) — Phase III

Grupo de Análisis para el Desarrollo, Lima. Etudier les problèmes macroéconomiques préviens les plus urgents, trouver des moyens d'observer les politiques et rechanage et prévoir leurs effets à court terme. 174 500 \$ — 24 mois.

87-0143 Développement urbain et politiques (Equateur) — Phase II

Centro de Investigaciones CIUDAD, Quito. Etudier les problèmes urbains choisis et les politiques s'y rapportant dans le contexte de l'urbanisation contemporaine de l'Equateur. 300 000 \$ — 36 mois.

87-0144 Le panier de consommation alimentaire en Bolivie

Centro de Estudios de la Realidad Económica y Social, La Paz. Déterminer l'évolution de la consommation des aliments, les canaux de distribution des principaux produits alimentaires et les stratégies alimentaires de survie élaborées par la population dans les principaux centres urbains et ruraux du pays. 130 700 \$ — 24 mois.

87-0145 Incidence socioéconomique régionale des zones de transformation des produits d'exportation (Asie) — Phase II

University of the Philippines, Centre for Guangdong Social and Economic Development Studies, Chine, Sydney, Australie. Etudier les aspects sociaux et économiques des liens de sous-traitance qui ont été établis entre les entreprises situées dans les zones de transformation des produits d'exportation et celles situées en région rurale. 122 900 \$ — 12 mois.

87-0150 Fécondité chez les adolescentes (Cameroun)

Ministère du Plan et de l'Aménagement du territoire, Yaoundé. Permettre à la Direction de la statistique et de la comptabilité nationale de comprendre le phénomène de la fécondité des adolescentes, ses répercussions sur la scolarisation, la mortalité maternelle et infantile, ses causes socio-économiques et culturelles et ses implications quant à la contraception. 151 720 \$ — 18 mois.

87-0152 Les femmes et la modernisation de l'agriculture dans le Nord-Est du Brésil

Fundação João Nabuco, Recife. Permettre à l'Instituto de Pesquisas Sociais (IPS), d'évaluer l'impact de la modernisation agricole sur la condition des femmes très pauvres du Nord-Est du Brésil qui travaillent à des projets d'irrigation et qui sont victimes de discrimination au travail. 160 500 \$ — 24 mois.

87-0159 Fécondité et comportements socio-psychologiques chez les adolescentes (Mali)

Ecole normale supérieure, Bamako. Permettre à l'Institut supérieur de formation pour la recherche appliquée de mener une étude psychologique détaillée sur le comportement des adolescents face à la fécondité. 93 700 \$ — 24 mois.

87-0160 Fécondité chez les adolescentes (Mauritanie)

Direction de la statistique et de la comptabilité de Mauritanie, Nouakchott. Permettre au Centre d'études démographiques et sociales de mener une analyse approfondie de la fécondité des adolescentes en utilisant principalement les données de l'enquête nationale mauritanienne sur la Fécondité. 52 100 \$ — 24 mois.

87-0162 Organisations communautaires (Pérou)

Universidad Nacional San Antonio Abad de Cusco. Permettre à l'Instituto de Investigación UNSAAC-NUFFIC d'étudier le succès relatif des collectivités paysannes et d'envisager les adaptations de nature à en faire le type d'organisation de choix favorisant le développement rural au Pérou. 68 450 \$ — 18 mois.

87-0166 Enfants indiens et leurs difficultés d'apprentissage de la lecture dans les écoles primaires guatémaltèques

Universidad del Valle de Guatemala. Examiner les méthodes d'enseignement actuelles et leurs résultats chez les Indiens et les «ladiño» (hispanophones) dans les écoles publiques afin d'établir des directives visant à améliorer la lecture chez les enfants. 21 230 \$ — 12 mois.

87-0176 Fécondité chez les adolescentes (Côte d'Ivoire)

Direction de la statistique, Abidjan. Mener une analyse approfondie des données de «l'enquête ivoitienne de fécondité». 86 400 \$ — 24 mois.

87-0057 Organisations gérées par les collectivités (Equateur)
Centro de Educación y Promoción Popular, Quito.
Etudier les facteurs qui déterminent le succès ou l'échec des programmes communautaires réalisés par des organisations paysannes. 56 900 \$ — 12 mois.

87-0071 Le rôle des femmes dans les syndicats (Argentine)
Instituto Latinoamericano de Estudios Transnacionales, Buenos Aires. Identifier les facteurs politiques, sociaux et idéologiques qui éloignent les travailleuses des mouvements syndicaux. 45 630 \$ — 12 mois.

87-0074 Réforme de la sécurité sociale (Jamaïque)
Université des Indes occidentales, Kingston.
Permettre à l'Institut de recherche sociale et économique d'étudier le Plan national d'assurance de la Jamaïque et proposer des changements précis qui permettront d'améliorer sa gestion et en assureront la solidité financière. 38 300 \$ — 9 mois.

87-0075 Hyperinflation, récession et croissance (Bolivie)
Universidad Católica Boliviana, La Paz. Permettre à l'Institut de Investigaciones Socioeconómicas d'étudier l'impact de l'hyperinflation et des efforts de stabilisation sur la structure de production de la Bolivie, en s'attachant particulièrement au secteur manufacturier. 74 000 \$ — 18 mois.

87-0076 Programmes de repeuplement — régime foncier (Antilles) — Phase II
Université des Indes occidentales, Barbade. Evaluer le principe et la pratique des collectivités agricoles telles qu'elles sont formulées dans les politiques des pays concernés. 61 800 \$ — 18 mois.

87-0077 Trajectoires des élèves de l'enseignement général (Côte d'Ivoire)
Centre interafricain de recherches et d'études supérieures en sciences de l'éducation, Lomé.
Retracer le parcours académique et professionnel des élèves interviewés en 1979 dans les lycées et collèges d'enseignement général en Côte d'Ivoire et évaluer l'efficacité interne et externe du système d'éducation. 40 700 \$ — 12 mois.

87-0078 Programme de recherche et de formation : Centre démographique du Caire (Egypte) — Phase V
Centre démographique du Caire. Réaliser ses objectifs de recherche et de formation en 1988, en aidant 10 étudiants africains inscrits au programme du diplôme général, du diplôme spécial et de la licence en démographie. 161 100 \$ — 12 mois.

87-0087 Incidence de la pénurie de bois de feu sur le travail des femmes et l'alimentation des familles (Burkina Faso)
Société africaine d'études et de développement, Ouagadougou. Etudier l'impact de la rareté croissante de bois de feu au Burkina Faso sur la charge de

travail des femmes et sur l'alimentation des familles dans les régions rurales. 53 100 \$ — 18 mois.

87-0088 Gestion de la dette (Nicaragua) *
Coordinadora Regional de Investigaciones Económicas y Sociales, Managua. Analyser la gestion de la dette au Nicaragua. 26 340 \$ — 18 mois.

87-0099 Emploi non agricole (Indonésie)
National Planning Agency, Jakarta. Permettre à son bureau de la main-d'œuvre d'évaluer l'emploi rural non agricole des femmes à Java. 89 000 \$ — 14 mois.

87-0109 L'électrification rurale en Argentine : diffusion des micro-usines hydroélectriques
Instituto de Economía Energética, Buenos Aires.
Etudier les mécanismes juridiques, institutionnels et financiers qui permettraient de fournir de l'électricité à plus de communautés rurales de Misiones grâce à une combinaison des systèmes d'électricité centralisés et décentralisés. 65 950 \$ — 18 mois.

87-0112 Consortium international pour la recherche économique (Afrique subsaharienne) *
Fondation Rockefeller, Etats-Unis, ou la corporation qui sera créée afin d'administrer ledit projet. Fournir des fonds pour la création d'un programme de recherche en macroéconomie en Afrique subsaharienne financé par un groupe d'organismes donateurs. 750 000 \$ — 36 mois.

87-0120 Logements locaux et partagés (Amérique latine) *
Instituto Universitario de Pesquisas do Rio de Janeiro, Brésil. Pontificia Universidad Católica de Chili, Centro de la Vivienda y Estudios Urbanos, Mexico, Centro de Estudios Urbanos, Venezuela, les marchés de logements locaux et partagés dans de grandes villes d'Amérique latine (Brésil, Chili, Mexique et Venezuela) et faire des recommandations concernant la politique à ce sujet. 366 700 \$ — 24 mois.

87-0121 Réseau de la recherche en macroéconomie (Amérique latine)
Fundación para la Educación Superior y el Desarrollo, Colombie. Financer une co-recherche sur l'ajustement structurel et l'efficacité des politiques de formation de jeunes universitaires dans les centres participants. 485 000 \$ — 36 mois.

87-0125 Réseau de recherche éducationnelle de l'Afrique orientale et australe — Phase II *
University of Botswana, University of Zambia, National University of Lesotho, Makerere University, Uganda, University of Swaziland, ministère de l'Éducation, Tanzanie, ministère de l'Éducation, Éthiopie. Financer le réseau de recherche en éducation de l'Afrique orientale et australe afin de favoriser la collaboration et l'échange d'information

87-0031 Etablissements de réfugiés (Somalie) et Réseau de recherche sur les réfugiés (Asie)
Hababir, Mogadishu. Dresser un profil socioéconomique et démographique des réfugiés et des non-réfugiés habitant les zones de refuge de la Somalie et financer la création d'un réseau de chercheurs travaillant dans le cadre de projets sur les réfugiés subventionnés par le CRDI en Afrique et en Asie. 213 000 \$ — 30 mois.

87-0040 Travailleurs saisonniers et modernisation de l'agriculture (Chili)
Grupo de Estudios Agro-Regionales, Santiago. Etudier la situation des travailleurs saisonniers et temporaires dans les régions chiliennes productrices de fruits destinées à l'exportation face à leur comportement démographique, au marché du travail et à l'accès aux services sociaux. 133 000 \$ — 24 mois.

87-0045 Politique monétaire dans les pays les moins avancés de production primaire à faible revenu (Global)
Overseas Development Institute, Londres. Recueillir des informations sur certains aspects de la politique monétaire de ces pays; évaluer cette politique monétaire en fonction de ses succès ou de ses échecs et, de manière plus générale, en fonction de son rôle de stabilisatrice de l'économie. 49 000 \$ — 21 mois.

87-0050 Effet des nouvelles technologies de communication (Pérou)
Centro de Estudios sobre Cultura Transnacional, Lima. Permettre à l'Instituto para América Latina d'explorer l'effet des nouvelles technologies télévisuelles, des structures institutionnelles et des relations inter-industrielles sur les systèmes de télévision nationale en Amérique latine et évaluer les chances de création d'une industrie de la télévision économiquement viable, autonome, répondant aux besoins du pays. 90 530 \$ — 18 mois.

87-0051 Changement technologique et développement agroindustriel (Uruguay)
Centro de Investigaciones Económicas, Montevideo. Définir les moyens d'améliorer l'exportation de l'agroindustrie, ses obstacles et déterminer les éléments-clés de la structure décisionnelle nécessaire pour promouvoir le progrès technique. 80 330 \$ — 18 mois.

87-0053 Marchands ambulants d'aliments dans le secteur parallèle (Inde)
Centre of Studies in Social Sciences, Pune. Aider le gouvernement à élaborer une politique visant à réglementer, surveiller et faciliter le commerce des marchands ambulants. 38 440 \$ — 24 mois.

87-0054 Politiques d'aide au secteur parallèle (Kenya)
Université de Nairobi. Permettre au Département de la planification rurale et régionale de formuler des politiques de crédits et de formation pour le secteur parallèle au Kenya. 77 400 \$ — 24 mois.

et de la planification et de doter la région des compétences nécessaires dans le domaine de la recherche sur les politiques énergétiques. 288 620 \$ — 30 mois.

87-0002 Petites bourses régionales (Pérou) — Phase II
Asociación Peruana para el Fomento de las Ciencias Sociales, Lima. Administrer un programme de petites bourses destiné à améliorer la capacité de recherche des universités provinciales du Pérou. 108 000 \$ — 24 mois.

87-0005 Adaptation socioéconomique dans les collectivités indiennes (Equateur)
Centro Andino de Acción Popular, Quito. Créer un modèle d'analyse du processus de changement dans les collectivités rurales du Nord des Andes afin de trouver des mécanismes d'aide appropriés à ces collectivités. 87 000 \$ — 18 mois.

87-0006 Changement technique et structurel dans l'industrie du vêtement (Turquie)
Turkish Social Science Association, Ankara. Examiner les causes du dynamisme de l'industrie du vêtement en Turquie et déterminer les nouveaux investissements et nouvelles politiques nécessaires pour maintenir et accroître la compétitivité de ce secteur. 43 670 \$ — 18 mois.

87-0008 Ajustement et changement technologique dans la petite métallurgie (Nicaragua)
Instituto Nicaraguense de Investigaciones Económicas y Sociales, Managua. Etudier le processus d'adaptation d'un ensemble d'industries de la petite métallurgie, les effets de cette adaptation sur l'expansion des industries, les stratégies de transfert de technologie et les politiques de planification dans ce secteur de l'économie. 78 090 \$ — 21 mois.

87-0011 Diffusion de technologies d'invention locale (Sierra Leone)
Université de Sierra Leone, Freetown. Définir les facteurs qui influent, de façon positive ou négative, sur le succès des technologies développées localement. 52 850 \$ — 24 mois.

87-0017 Petites subventions de recherche (Afrique de l'Est) — Phase V
Organization for Social Science Research in Eastern Africa (OSSREA), Ethiopie. Renforcer la capacité de recherche en sciences sociales en incitant les universitaires locaux à faire des recherches qui permettront de comprendre les changements sociaux et économiques dans les pays de l'Afrique orientale et de l'Afrique australe. 284 510 \$ — 24 mois.

87-0020 Enseignement secondaire (Argentine) — Phase II
Facultad Latinoamericana de Ciencias Sociales, Buenos Aires. Renforcer et consolider un programme intégré de recherche, de diffusion et de formation afin de mieux comprendre les innovations au niveau de l'enseignement secondaire. 199 800 \$ — 30 mois.

87-0253 Système national d'information (Jordanie) *
Société royale des sciences, Amman. Permettre au Centre d'information scientifique et technique et au Centre d'information socioéconomique de mettre sur pied un système national d'information sur les secteurs public et privé, grâce à la création, la gestion et la coordination de bases et de centres de données. 420 000 \$ — 24 mois.

87-0256 Réseau d'information au service du développement international sur la recherche en cours (Gloбал) *
Association des instituts de recherche et de formation en matière de développement de l'Asie et du Pacifique, Malaisie, Consejo Latinoamericano de Ciencias Sociales, Argentine, Conseil pour le développement de la recherche économique et sociale en Afrique, Sénégal, Association européenne des instituts de recherche et de formation en matière de développement, Pays-Bas. Améliorer le niveau d'information sur la recherche en sciences sociales et promouvoir la collaboration régionale et interrégionale afin de faciliter le processus de développement. 274 000 \$ — 36 mois.

87-0278 Cours de formation de bibliothécaires paraprofessionnels (Népal) *
Université Tribhuvan, Kirtipur. Permettre à sa Bibliothèque centrale de former des bibliothécaires paraprofessionnels afin qu'ils organisent leur bibliothèque et répondent aux besoins de leur clientèle. 51 000 \$ — 24 mois.

87-0282 Système d'information sur les caisses de crédit latino-américaines (FECOLAC) *
Fundación Educativa de la Confederación Latinoamericana de Cooperativas de Ahorro y Crédito, Panama. Renforcer et développer les caisses de crédit comme composante du développement en fournissant des informations pertinentes en temps opportun aux membres de ces caisses. 97 600 \$ — 24 mois.

87-0303 DEVINSA - Maldives *
Ministère de la Planification et du Développement, Malé. Renforcer les sources d'information du pays aux fins du développement économique et social, en participant au projet du Réseau d'information sur le développement en Asie du Sud (DEVINSA). 31 400 \$ — 24 mois.

87-0317 ECKONOWMICS : système expert sur microordinateur d'aide à la planification économique et à l'établissement de politiques (Philippines) *
Social Weathers Station Inc., Quezon City. Créer un prototype de logiciel montrant comment les microordinateurs et l'intelligence artificielle pourraient offrir une solution rentable à la gestion et à l'intégration de données et de modèles économiques aux fins de planification et d'établissement de politiques. 60 000 \$ — 12 mois.

87-0339 Personnes-ressources de MINISIS (Amérique latine) *
Colegio Mayor de Nuestra Señora del Rosario, Bogotá, Centro de Investigación y Docencia Económicas (CIDE), Mexico. Montrer l'efficacité de personnes-ressources de MINISIS comme moyen de fournir formation et assistance aux nouveaux usagers nationaux et régionaux et promouvoir l'utilisation du logiciel MINISIS comme outil de traitement de l'information à travers l'Amérique latine. 94 180 \$ — 24 mois.

87-1012 Brevets : Information technologique (Antilles-Canada) *
Commission économique pour l'Amérique latine et les Antilles, Chili, Consommation et Corporations, Canada. Renforcer et améliorer les divers aspects de la propriété industrielle par l'information sur les brevets et fournir un programme qui permettra de mettre à profit l'information technologique pour le développement industriel de la région des Caraïbes. 383 955 \$ — 36 mois.

87-1019 Cahier d'information sur les poisons destiné aux pays en développement (Global) *
Organisation mondiale de la santé, Suisse, Centre canadien d'hygiène et de sécurité au travail, Canada, Centre de toxicologie du Québec, Canada. Créer un cahier d'information multilingue (français, anglais, espagnol) sur le diagnostic et le traitement des empoisonnements; mettre sur pied une banque de données sur les produits trouvés localement et sur les pays en développement de prévenir et de traiter les cas d'empoisonnement; renforcer la capacité des cas d'empoisonnement; 256 000 \$ — 36 mois.

87-1023 Apport de la télédétection à la cartographie pédologique (Maroc-Canada) *
Institut agronomique et vétérinaire Hassan II, Rabat, Université de Sherbrooke. Choisir et adapter une méthodologie basée sur la télédétection par satellite pour la cartographie pédologique au Maroc et préparer une équipe de chercheurs marocains pour son utilisation. 135 355 \$ — 24 mois.

87-1037 Télédétection et planification des aménagements agricoles (Mali-Canada) *
Ministère de l'Agriculture, Bamako, Université Laval, Québec. Améliorer les compétences de la Direction nationale du génie rural du Mali en utilisant des applications de la télédétection afin d'identifier les meilleurs sites d'aménagement agricole dans la vallée du fleuve Niger. 145 303 \$ — 24 mois.

Sciences sociales
86-0243 Planification et politique énergétiques (Afrique de l'Est et Afrique australe) *
Agence suédoise de coopération en recherche avec les pays en développement. Subventionner un programme de recherche et de formation en vue de répondre aux besoins des responsables des politiques

87-0157 Base de données nationale et utilisation de réseaux informatisés de données — Mexique
Instituto Latinoamericano de Estudios Transnacionales, Mexico. Etudier comment la collaboration et la création de réseaux informatisés peuvent améliorer le développement et l'utilisation des bases de données nationales et faire des expériences avec le réseau national mexicain de communication par paquets pour montrer son utilité et favoriser son utilisation. 41 789 \$ — 18 mois.

87-0167 Télédétection appliquée à la pêche au thon et à l'espadon (Chili)
Universidad Católica de Valparaíso. Permettre à la Escuela de Ciencias del Mar d'utiliser efficacement les cartes de température de surface de l'eau de mer, qui réunissent des informations permettant d'aider les petits pêcheurs à repérer le thon et l'espadon. 71 330 \$ — 24 mois.

87-0184 Service d'information sélective sur les pêches (SISP) (Global) — Phase II : Projet analyse et fourniture de documents
International Center for Living Aquatic Resources Management (ICLARM), Philippines. Continuer de fournir les services suivants : un service de réponses sur les pêches ; un service de recherches bibliographiques ; un service de fourniture de documents ; un service d'évaluation de la littérature scientifique par des moyens scientométriques ; la publication de mini comptes rendus ; la promotion de l'utilisation d'autres services et sources d'information dans le même domaine. 147 600 \$ — 24 mois.

87-0189 Centre-ressource MINISIS — ALDOC (Maghreb)*
Centre de documentation et d'information de la Ligue des Etats arabes, Tunisie. Aider les usagers du système de gestion de bases de données bibliographiques à avoir accès aux services de soutien en arabe, grâce à la création d'un centre-ressource MINISIS. 200 000 \$ — 36 mois.

87-0193 Réseau national d'information économique et commerciale (Algérie)*
Centre national d'information et de documentation économiques, Alger. Consolider et rationaliser l'ensemble du système d'information économique sur le plan national afin d'améliorer son efficacité, de diversifier et d'étendre ses services et d'amorcer la décentralisation à l'échelle régionale. 95 000 \$ — 18 mois.

87-0194 Système d'information (Global) — SATIS
SATIS, Utrecht, Pays-Bas. Créer un système de classification, un thésaurus et un guide des ressources en formation et dresser un répertoire des ressources et des possibilités en matière de formation. 268 900 \$ — 36 mois.

87-0195 Système d'information sur les pêches côtières (Chili)*
Ministerio de Economía, Santiago. Permettre à

87-0203 Thésaurus sur les réfugiés (Global)
Haut commissaire des Nations-Unies pour les réfugiés, Suisse. Produire un thésaurus multilingue sur les réfugiés qui servira tant à l'organisation (bureaux locaux et siège social) qu'au nouveau réseau international de documentation sur les réfugiés. 93 300 \$ — 18 mois.

87-0214 Réseau régional d'information en sciences sociales CLACSO (Amérique latine)*
Conseil latinoaméricain de sciences sociales (CLASCO), Argentine. Améliorer ses capacités de recherche en sciences sociales plus particulièrement et celles de la région en général en fournissant des services d'information appropriés et efficaces. 97 000 \$ — 24 mois.

87-0217 Système national d'information pour la science et la technologie (Costa Rica)
Consejo Nacional de Investigaciones Científicas y Tecnológicas, San José. Permettre au ministère de la Science et de la Technologie de coordonner, de planifier et de mettre en oeuvre des politiques de recherche scientifique et technologique qui répondent aux priorités et aux besoins nationaux exposés dans le Plan de développement national. 88 600 \$ — 24 mois.

87-0228 Essai de communication par paquets radio (Lesotho)*
Lesotho Telecommunications Corporation, Maseru. Etablir et évaluer l'utilité des techniques de transmission radio par paquets et leur application aux besoins de communication et de diffusion d'information en milieu rural. 149 000 \$ — 24 mois.

87-0247 Diplôme en bibliothéconomie et sciences de l'information (University of the South Pacific)*
University of the South Pacific, Fidji. Mettre en place un programme de formation en bibliothéconomie au niveau du 1^{er} cycle, au profit des pays de la région, et tenir des ateliers régionaux et nationaux sur des sujets jugés prioritaires. 243 500 \$ — 48 mois.

87-0248 REDATAM (CELADE) (Amérique latine et les Antilles) — Phase II*
Commission économique pour l'Amérique latine, Chili. Permettre au Centre latinoaméricain de démographie d'aider les pays à intégrer les facteurs démographiques à la planification de leur développement et de s'assurer que les recensements de la population et des logements de 1990 en Amérique latine et aux Antilles fournissent des données à cette fin. 214 700 \$ — 24 mois.

87-0093 Réseau d'information sur la formation professionnelle en Asie et dans le Pacifique
Asian and Pacific Skill Development, Programme de l'Organisation internationale du travail, Pakistan. Créer ou renforcer cinq centres de documentation sur la formation professionnelle en Asie du Sud et du Sud-Est. 198 600 \$ — 24 mois.

87-0094 Réseau africain d'information sur la formation professionnelle

Centre interafricain pour le développement de la formation professionnelle (CIADFOP) du Bureau international du travail, Côte d'Ivoire. Développer un système d'information reposant sur les unités d'information spécialisées dans le domaine de la formation des pays-membres du CIADFOP. 203 500 \$ — 36 mois.

87-0095 Système d'information sur la gestion des pêcheries (Trinité-et-Tobago)

Ministère de la Production alimentaire, de l'Exploitation des mers, de la Forêt et de l'Environnement, Port d'Espagne. Permettre à sa Division des pêcheries de mieux manipuler les diverses données nécessaires pour gérer les ressources piscicoles en créant un système d'information pour la gestion des pêches. 229 625 \$ — 36 mois.

87-0096 Réseau d'information sur l'eau et l'hygiène (Indonésie)

Ministère des Travaux publics, Jakarta. Permettre au Directeur général des établissements humains de faire les travaux préparatifs pour la création d'un réseau national de documentation et d'information sur l'eau et l'hygiène en Indonésie. 306 225 \$ — 36 mois.

87-0097 Système africain de documentation et d'informations sur les grandes endémies

Organisation de coordination et de coopération pour la lutte contre les grandes endémies (OCCCE), Burkina Faso. Développer et renforcer les structures documentaires de l'OCCCE et démarer un réseau interrégional de documentation sur les grandes maladies endémiques. 282 225 \$ — 24 mois.

87-0098 Centre national de documentation en santé publique (Tchad)

Ministère de la Santé publique, Njaména. Mettre en place un système d'information et de documentation en santé publique au Centre national de documentation en santé publique. 175 800 \$ — 24 mois.

87-0101 Réseau régional d'information sur les femmes arabes — Phase préliminaire

Université américaine du Caire, Égypte. Permettre au Centre de recherche sociale de choisir et d'approuver la structure ou l'organisation qui garantirait le bon fonctionnement du RINAW. 90 500 \$ — 18 mois.

87-0102 Langues nationales du Bénin

Centre national de linguistique appliquée, Cotonou.

Renforcer la recherche linguistique au Bénin afin de fournir à l'Etat les éléments nécessaires à la prise de décision en ce qui concerne l'utilisation officielle des langues nationales. 80 000 \$ — 24 mois.

87-0106 Centre-ressource MINISIS (Chine)

Centre d'information scientifique et technique, Beijing. Etablir un centre-ressource MINISIS à Beijing dans un établissement qui connaît MINISIS, surtout dans des bibliothèques et des centres de documentation. 112 600 \$ — 24 mois.

87-0107 Réseau d'étude des systèmes de production en Afrique de l'Ouest

Recherche et développement des cultures vivrières dans les zones semi-arides (SAFORAD), Burkina Faso. Permettre au Réseau d'étude des systèmes de production en Afrique de l'Ouest de mettre en place un système d'information et de documentation au sein de l'organe de coordination du RESPAO. 203 265 \$ — 24 mois.

87-0108 CEHANET (Global)

Organisation mondiale de la santé, Égypte. Permettre au Regional Centre for Environmental Health Activities (CEHA) de créer et coordonner un réseau d'information sur l'eau et l'hygiène (CEHANET) dans l'Est de la Méditerranée. 252 000 \$ — 24 mois.

87-0116 Système arabe d'information géologique et minière

Organisation arabe des ressources minières, Maroc. Créer un réseau arabe d'information géologique et minière qui permettra de réunir et de traiter la documentation publiée et non publiée dans ce domaine afin de la diffuser efficacement auprès des utilisateurs. 166 415 \$ — 36 mois.

87-0117 Services d'information —

Commission de développement industriel (Sri Lanka)

Industrial Development Board, Moratuwa. Multiplier et améliorer ses services d'information technologique et amélérer les autres sources d'information et en introduisant de nouvelles méthodes de diffusion de l'information. 176 715 \$ — 36 mois.

87-0127 Centre d'information sur le bambou (Chine)

Académie chinoise de foresterie, Beijing. Permettre à l'Institut d'information scientifique et technologique sur la foresterie de créer un centre d'information sur le bambou. 154 300 \$ — 36 mois.

87-0146 Réseau d'information sur la banane et la banane plantain — Phase préliminaire (Global)

Réseau international pour l'amélioration de la banane et de la banane plantain (INIBAP), France. Etablir un système d'information qui répondra aux besoins des usagers de l'INIBAP. 469 000 \$ — 24 mois.

87-1052 Adoption de technologies par les PME de Singapour (Singapour-Canada)*

Singapore Institute of Standards and Industrial Research (SISR), Université de Saskatchewan, Saskatoon, Conseil de recherche de Saskatchewan, Saskatoon. Étudier les caractéristiques des PME qui ont réussi grâce à l'adoption de technologies, concevoir et essayer un mécanisme permettant d'améliorer l'efficacité de l'aide technologique du SISR à l'égard des PME. 216 250 \$ — 24 mois.

Sciences de l'information

87-0009 Centre international d'information sur le buffle (Globe) — Phase II

Université Kasetsart, Thaïlande. Permettre au Département de zootechnie et à la bibliothèque principale de s'assurer que les services et produits du Centre international d'information sur le buffle (IBIC) soient disponibles aux usagers cibles et que la communauté scientifique contribue à tout le système d'IBIC. 80 160 \$ — 24 mois.

87-0010 La communication au service du développement — Réseau d'information sur l'Asie et le Pacifique

Asian Mass Communication Research and Information Centre, Singapour. Accroître et améliorer sa capacité de rassembler de l'information sur les communautés, la rendre utile pour le développement dans la région, en relayant la présentation et la diffusion. 303 000 \$ — 36 mois.

87-0012 Service d'information et de documentation des Chambres de Commerce d'Afrique centrale (SIDCCAC)

Fédération des Chambres de commerce de l'Afrique centrale, Congo. Renforcer son service d'information et de documentation afin de lui permettre de recueillir, de traiter et de diffuser une information mise à jour, favorisant la croissance d'échanges commerciaux sous-régionaux et une meilleure connaissance des possibilités économiques existantes. 248 850 \$ — 36 mois.

87-0042 Atlas de l'Éthiopie — Phase II

Agence éthiopienne de cartographie, Addis-Ababa. Publier un Atlas national multicolore de l'Éthiopie et le diffuser aux utilisateurs, à l'échelle locale et internationale. 91 510 \$ — 12 mois.

87-0047 Repidisa — Nicaragua

Organisation panaméricaine de la santé, États-Unis. Permettre à l'Instituto Nicaragüense de Acueductos y Alcantarillados de mettre sur pied un service d'information sur le génie sanitaire et la gestion des eaux au service du développement national. 43 945 \$ — 24 mois.

87-0049 Services d'information sur l'urbanisation (Uruguay)

Centro de Informaciones y Estudios del Uruguay, Montevideo. Établir un service national d'information bibliographique sur l'urbanisation. 59 845 \$ — 24 mois.

87-0052 Appui et amélioration — Documentation agricole en Mauritanie — Phase II

Société nationale pour le développement rural (SONADER), Nouakchott. Élever ses capacités au niveau des institutions documentaires des pays limitrophes pour lui permettre de remplir sa mission de Centre national de documentation agricole et de développement rural. 93 715 \$ — 24 mois.

87-0055 Projet d'expérimentation et de formation en communications informatisées en Asie

Asia Monitor Resource Centre, Hong Kong. Développer des techniques de communications informatisées apprises en Asie, promouvoir et faciliter ce développement au sein d'organisations axées sur l'action et intéressées à l'essor des mouvements populaires. 78 686 \$ — 24 mois.

87-0058 Information pour le développement rural et urbain (Chili)

Centro de Estudios en Tecnologías Appropiadas para América Latina (CETAL), Valparaiso. Créer au CETAL un Service d'information sur les technologies appropriées. 57 662 \$ — 24 mois.

87-0059 Gestion moderne des systèmes d'information (Sahel)

Institut du Sahel, Bamako, République du Mali. Permettre au Réseau sahélien d'information scientifique et technique d'organiser un séminaire qui mettra à la disposition de 17 cadres africains les méthodes théoriques et pratiques pour créer ou gérer des systèmes d'information en utilisant les nouvelles technologies. 90 167 \$ — 6 mois.

87-0083 Service coopératif de transfert de l'information des collèges agronomiques thaïs

Ministère de l'Éducation, Bangkok. Permettre au Collège agricole Lamphun de fournir, par ses collèges agronomiques, de l'information aux enseignants, aux élèves et aux fermiers, en améliorant et en renforçant son système d'éducation agricole. 129 000 \$ — 36 mois.

87-0089 Information sur l'administration publique (Amérique latine) — Phase III

Centre latino-américain d'administration du développement (CLAD), Venezuela. Soutenir les organismes gouvernementaux, la communauté universitaire et les autres unités en Amérique latine, aux Caraïbes et en Espagne, au moyen d'un système d'information s'appuyant sur un réseau latino-américain, coordonné par le Centre de documentation du CLAD. 310 000 \$ — 36 mois.

87-0090 Système national d'information (Soudan)

Conseil national pour la recherche, Khartoum. Permettre à son Centre national de documentation d'automatiser ses services d'information et de constituer une base de données bibliographiques nationale pour l'information scientifique, technologique et socio-économique. 91 700 \$ — 36 mois.

éventuellement des autres régions du socle métamorphique pré-cambrien en Afrique. 305 623 \$ — 24 mois.

87-1018 Aquitères discontinus (Niger-Canada)
Université de Niamey, Université du Québec à Montréal. Examiner la structure et le fonctionnement des aquitères discontinus du socle à partir d'une étude des sites choisis dans des bassins disposant d'ouvrages hydrauliques en exploitation afin de mettre au point un modèle hydrogéologique national et régional. 309 230 \$ — 36 mois.

87-1020 Constructions quinchas résistantes aux séismes (Pérou-Canada)
Pontificia Universidad Católica del Perú, Lima, Université technique de la Nouvelle-Ecosse, Halifax. Evaluer la résistance aux tremblements de terre des habitations Quinchas afin de créer un modèle à l'épreuve des séismes. 339 645 \$ — 24 mois.

87-1021 Production de carmin à partir de cochénilles (Pérou-Canada) — Phase II
Instituto de Investigación Tecnológica Industrial y de Normas Técnicas, Lima, Université Simon Fraser, Burnaby. Mettre au point une technologie de production commerciale de carmin à haut rendement et à forte teneur en acide carminique. Les procédés établis seront conçus pour une usine pilote et la technologie transférée aux utilisateurs éventuels. 229 960 \$ — 24 mois.

87-1025 Huiles essentielles (Bolivie-Canada)
Universidad Mayor de San Simón, Cochabamba, Université du Québec à Chicoutimi. Promouvoir l'utilisation des ressources naturelles renouvelables dans le Département de Cochabamba et développer une technologie qui permette l'écoulement de la production industrielle sur le marché bolivien et, éventuellement, sur les marchés extérieurs de la zone andine. 383 754 \$ — 36 mois.

87-1032 Fonderie du fer ductile (Pérou-Canada)
Instituto de Investigación Tecnológica Industrial y de Normas Técnicas, Lima, Université Queen, Kingston. Mettre au point des méthodes industrielles appropriées pour la production d'éléments de fer ductile de haute qualité à l'intention des petites et moyennes fonderies du Pérou. 249 700 \$ — 36 mois.

87-1033 Ciment à base de cendres volcaniques (Bolivie-Canada)
Ministerio de Planeamiento y Coordinación, La Paz, Université de Calgary. Mettre au point un ciment à base de calcaire et de pouzzolane et des matériaux de construction à base de ciment pour construire des logements à prix modique destinés aux pauvres. 300 000 \$ — 36 mois.

87-1034 Adoption de technologies par les PME (Thaïlande-Canada)
Département de promotion industrielle, Bangkok,

Techonnet Asia, Singapour, Conseil de recherche de la Saskatchewan, Saskatoon. Concevoir un système pour améliorer l'accès à la technologie et faciliter son adoption par des petites et moyennes entreprises (PME) en se servant surtout des efforts que déploient les diverses organisations de ces mêmes entreprises. 214 200 \$ — 18 mois.

87-1035 Agroécologie (Tanzanie-Canada) — Phase II
Sokoine University of Agriculture, Morogoro, Université de Guepjh. Améliorer la fertilité des sols tanzaniens en se servant des ressources géologiques locales. 497 500 \$ — 36 mois.

87-1036 Anticorrosif à base de tannin de pin (Chili-Canada)
Universidad de Concepción, Université McMaster, Hamilton. Développer l'industrie chimique régionale de sorte qu'elle puisse se servir des sous-produits de *Pinus radiata* afin de créer de l'emploi et des revenus. 107 600 \$ — 24 mois.

87-1044 Zones spéciales d'électronique (Malaisie-Canada)
Institut malaisien de systèmes microélectroniques, Kuala Lumpur, Université Simon Fraser, Burnaby. Mener une étude économique ou industrielle de l'industrie de l'électronique de la Malaisie dans les zones de conditionnement des exportations et appliquer les résultats à l'élaboration de politiques nationales à ce sujet. 166 980 \$ — 18 mois.

87-1046 Assèchement des étangs de boues industrielles (Malaisie-Canada)
Université de Malaya, Kuala Lumpur, Université Teknologi Malaysia, Kuala Lumpur, Université McGill, Montréal. Mettre au point une méthode d'assèchement des étangs de boues industrielles efficace et économique qui utilisera, dans la mesure du possible, les technologies, les installations et les ressources disponibles dans les régions visées. 348 900 \$ — 36 mois.

87-1048 SEAPOL (Asie du Sud-Est-Canada) — Phase II
Université Chulalongkorn, Thaïlande, International Institute for Transportation and Ocean Policy Studies, Halifax, Université de Victoria. Continuer de renforcer les capacités régionales de recherche dans le domaine du Droit de la mer, fournir des exposés de principe aux gouvernements asiatiques sur la gestion des richesses naturelles et favoriser les échanges informels entre États sur des questions maritimes litigieuses. 407 990 \$ — 30 mois.

87-1051 Carbonisation partielle de la tourbe (Burundi-Canada)
Office national de la tourbe, Bujumbura, Société d'ingénierie Carter Limitée, Québec. Mettre au point une technologie pour la transformation à petite échelle de la tourbe brûlée en charbon (un produit carbonisé) afin de satisfaire les besoins énergétiques des ménages. 145 365 \$ — 16 mois.

inaptes de la population de la vallée de Surkhet.

626 052 \$ — 24 mois.

Sciences de la terre et du génie

86-11027 Fabrication de briques à petite

échelle (Nigéria-Canada) *

Nigerian Building and Road Research Institute, Lagos. Prairie Masomry Research Institute, Accroître l'accès à des logements adéquats aux habitants des régions rurales et urbaines en réduisant le coût des matériaux de construction et aussi créer des emplois par la mise sur pied de petites entreprises de fabrication de briques. 255 000 \$ — 24 mois.

86-1029 Modules de microprocesseur

appliqués aux machines-outils et au

contrôle des processus (Inde-Canada) *

Limited. Hyderabad. Institut d'ordinique du Québec, Ste-Thérèse. Etudier la fabrication de modèles de microprocesseurs à 16 bits destinés à des systèmes de contrôle numérique informatisé et au contrôle de processus et renforcer les compétences en recherche de Production Aids and Control Electronics (India) Limited en fournissant une expérience pratique sur les outils les plus perfectionnés que possède l'Institut d'ordinique du Québec. 593 455 \$ — 24 mois.

87-0333 Phosphate d'Eppawala (Sri

Lanka) *

Institute of Fundamental Studies, Colombo. Etudier le gisement de phosphate d'Eppawala dans l'optique de la production commerciale d'engrais partiellement acidiés pour les marchés locaux. 92 600 \$ — 12 mois.

87-0341 Calcarénite (Maurice) *

Université de Maurice. Réduit. Permettre à l'École de technologie industrielle d'améliorer le logement à Rodrigues en rationalisant l'exploitation des gisements de calcarénite et en formulant des descriptions précises concernant l'utilisation des blocs tirés de ces gisements. 21 000 \$ — 24 mois.

87-0342 Prévention de la maladie de

Chagas par l'amélioration du logement

(Paraguay) *

Universidad Católica de Paraguay, Asunción. Permettre au Centro de Tecnología Apropriada et à l'Instituto de Investigaciones en Ciencias de la Salud de déterminer l'efficacité de diverses interventions dans la lutte contre la maladie de Chagas en milieu rural. 659 490 \$ — 36 mois.

87-1003 Ensablement des ports

(Chine-Canada)

Université de Nanjing, ministre des Pêches et Océans, Dartmouth. Déterminer les sources de sédiments et les taux de sédimentation et étudier les effets écologiques des déblais rejetés par les dragues dans les deux ports de l'île de Hainan, Sanya et Yangpu, et aux environs, afin d'aider à créer et

entretenir des installations portuaires. 512 400 \$ — 24 mois.

87-1004 Alliances d'acteurs industriels

(Brésil-Canada) — Phase II

Fundação Tecnico-Educacional Souza Marques, Rio de Janeiro. Metallurgical Consulting Services, Ltd, Saskatoon. Mettre au point des méthodes d'évaluation des dommages causés aux tuyaux en acier, chrome et molybdène, afin de rendre les opérations plus sécuritaires, d'introduire un plan d'entretien préventif et d'améliorer, à l'intention de l'industrie pétrochimique, les tuyaux en acier coulé à forte teneur en alliage qui sont soumis à une haute température. 199 650 \$ — 24 mois.

87-1005 Revêtement de toit en feuilles

d'asphalte (Costa Rica-Canada) *

Instituto Tecnológico de Costa Rica, Cartago. Conseil national de recherches, Ottawa. Mettre au point un revêtement de toit en feuilles d'asphalte, peu coûteuses et durables, et contribuer ainsi à un programme de logements conviviales pour les défavorisés. 332 600 \$ — 36 mois.

87-1006 Stabilité des pentes

Pontificia Universidade Católica do Rio de Janeiro, Université de l'Alberta. Edmonton. Analyser les risques d'instabilité des pentes par rapport au colluvium dans la région de Rio de Janeiro et préparer des directives pour mettre sur pied un plan d'urbanisation des favelas aménagées sur les pentes instables. 271 600 \$ — 24 mois.

87-1007 Pollution associée à l'utilisation du

charbon (Inde-Canada)

Institut indien de technologie, Bombay, Université Western Ontario, London. Evaluer l'impact sur l'environnement d'une consommation élevée de charbon dans les centrales thermiques; étudier et proposer des mesures correctives pour tenter de réduire les effets néfastes en améliorant le traitement des déchets ou en utilisant les produits obtenus à partir de ces déchets ou les deux. 369 500 \$ — 36 mois.

87-1016 Système hydrologique aitiplano

(Bolivie-Canada) *

Universidad Técnica de Oruro, Université Laval, Sainte-Foy. Accroître les connaissances du système hydrologique du fleuve Desaguadero afin de proposer des solutions aux problèmes des inondations et de contribuer à la formation de chercheurs compétents dans le domaine de l'hydrologie et des ressources en eau. 315 527 \$ — 36 mois.

87-1017 Productivité des aquifères du socle

(Burkina Faso-Canada) *

Université de Ouagadougou, Université du Québec à Chicoutimi. Augmenter la proportion des forages à haut rendement lors de futures campagnes de forage pour l'alimentation en eau potable des petites agglomérations urbaines du Burkina Faso et

Créer de nouvelles méthodes de prévention, de diagnostic et de traitement des maladies tropicales les plus répandues et de renforcer les capacités de recherche des pays en développement en offrant une formation en sciences biomédicales et diverses formes d'aide aux instituts. 400 000 \$ — 24 mois.

87-0286 Latrines DAFF (Guatemala) *
Centro de Estudios Mesoamericano Sobre Tecnología Apropriadá, Guatemala. Étudier l'accueil, aux points de vue technique et social, réservé aux cabinets familiaux de compostage et faire les recommandations nécessaires. 215 300 \$ — 36 mois.

87-0287 Empoisonnement par les pesticides (Jordanie) *
Université Birzeit, Cisjordanie. Réduire les risques auxquels s'exposent les agriculteurs de Cisjordanie et leurs familles qui utilisent les pesticides organophosphorés. 48 770 \$ — 12 mois.

87-0292 Intoxication des enfants au cadmium et à l'arsenic (Mexique) *
Universidad Autónoma de San Luis Potosí. Évaluer l'ampleur de la contamination du milieu par l'arsenic et le cadmium dans les zones résidentielles adjacentes aux fondreurs de cuivre et de zinc de San Luis Potosí, et examiner la mesure dans laquelle la santé de la population risque d'avoir été affectée par l'exposition à ces métaux toxiques. 78 680 \$ — 24 mois.

87-0293 Avitaminose A (Tanzanie) *
Tanzania Food and Nutrition Centre, Dar es-Salaam. Évaluer l'ampleur et la gravité de l'avitaminose A chez les enfants vivant dans une région tanzanienne exposée à la sécheresse. 57 490 \$ — 12 mois.

87-0304 Vaccination contre l'hépatite B de sujets atteints de bilharziose (Égypte) *
Université du Caire, Permettre à son Département de médecine tropicale (immunologie) d'évaluer l'efficacité (immunogénicité) du vaccin contre le virus de l'hépatite B chez des sujets atteints de bilharziose afin d'établir de bonnes stratégies préventives de l'hépatopathie. 127 000 \$ — 36 mois.

87-0305 Initiation aux problèmes majeurs de santé dans les programmes d'études de médecine — Phase III *
Université McMaster, Canada. Permettre à la Faculté des sciences de la santé d'aider les établissements d'enseignement des sciences de la santé à inclure aux professionnels de la santé les connaissances, les capacités et les attitudes voulues pour répondre aux besoins de santé des collectivités. 77 960 \$ — 12 mois.

87-0306 Éducation des mères et santé des enfants (Corée du Sud) *
Population Association of Korea, Séoul. Mieux connaître la relation entre l'éducation de la mère, son comportement et la santé de son enfant. 80 664 \$ — 24 mois.

87-0308 Épidémiologie de l'hépatite B (Mozambique) *
Ministerio da Saude, Maputo. Permettre à l'Instituto Nacional de Saude d'évaluer l'épidémiologie de l'hépatite B chez les enfants et leur mère à Maputo et un programme d'immunisation contre le virus de l'hépatite B applicable dans le pays. 193 682 \$ — 30 mois.

87-0309 Enseignement de l'hygiène pour prévenir le SIDA (Ouganda) *
Ministry of Local Government, Kampala. Permettre à l'Institut Nsamizi de formation en développement social de comprendre les connaissances, attitudes et habitudes des gens concernant le SIDA et de se servir des résultats de l'étude pour planifier un programme d'éducation du public. 33 395 \$ — 12 mois.

87-0318 Ankylostome (Indonésie) *
Udayana University, Bali. Déterminer la prévalence de l'infestation à l'ankylostome en rapport avec l'anémie dans la province de Bali aux fins de prévoir une stratégie réalisable de prévention et de lutte. 68 500 \$ — 24 mois.

87-0323 Maladie diarrhéique (Uruguay) *
Universidad de la República, Montevideo. Permettre au Departamento de Bacteriología y Virología de l'Instituto de Higiene de caractériser la maladie diarrhéique aiguë chez les enfants désavantagés de moins de 18 mois, de déterminer les facteurs susceptibles d'influer sur sa durée et son impact, et de proposer des moyens d'améliorer la gestion de la maladie. 52 380 \$ — 24 mois.

87-1039 Pollution des eaux souterraines (Tanzanie) *
Centre for Housing Studies du Institute, Dar es-Salaam. Étudier la contamination des eaux souterraines et de l'eau distribuée par les conduites dans les zones urbaines où existent des systèmes d'élimination des déchets afin d'élaborer des directives quant à l'emplacement de tels systèmes. 179 704 \$ — 24 mois.

87-1041 Perfectionnement des établissements et recherche sur les services de soins de santé aux enfants (Chine-Canada) *
Université Sun Yat-Sen des sciences médicales, Guangzhou, Université de Toronto, Canada. Aider les Départements de nutrition infantile et clinique et l'Université Sun Yat-Sen des sciences médicales à devenir autonome dans le domaine de la nutrition de la population et de la recherche en nutrition. 478 950 \$ — 60 mois.

87-1045 Amélioration de la qualité de la vie dans la vallée du Surkhet (Népal-Canada) *
Tribhuvan University, Katmandu, Université de Calgary, Canada. Recueillir des données sur les besoins fondamentaux des populations, y compris ceux qui sont liés à la santé et à la qualité de vie,

87-0239 Observation active de la tuberculose dans les collectivités éloignées (Mexique).
Universidad Autónoma de Guerrero. Permettre au Centre de recherches sur les maladies tropicales d'étudier la faisabilité de surveillance de la tuberculose au sein de collectivités éloignées à l'aide d'un microscope portatif peu coûteux. 28 690 \$ — 24 mois.

87-0241 Secteur minier (Bolivie).
Comité Ejecutivo de la Universidad Católica Boliviana, La Paz. Analyser la mortalité dans les mines déclin en étudiant deux mines représentatives : une mine coopérative et une mine d'Etat de Potosi et déterminer le processus de cette morbidité chez les mineurs et leurs familles. 147 444 \$ — 24 mois.

87-0243 Goitre endémique (Equateur).
Fundación Ciencia para el Estudio de Hombre y la Naturaleza, Quito. Déterminer la prévalence et l'étiologie du goitre le long de la côte de l'Equateur. 147 990 \$ — 24 mois.

87-0244 Mortalité maternelle et périnatale (Indonésie).
Coordinating Board of Indonesian Fertility Research, Bandung. Déterminer l'incidence, l'étiologie et le risque de mortalité maternelle et périnatale, ainsi que le recours aux services de soins maternels et infantiles afin d'améliorer les services d'hygiène maternelle et infantile et de contrôle des naissances dans la province de Java centrale. 145 320 \$ — 18 mois.

87-0245 Évaluation de l'administration et de la gestion des services de santé (Égypte)
Palestine Red Crescent Society, Heliopolis. Examiner ses méthodes et sa structure de gestion et d'administration, surtout en ce qui a trait aux politiques, à la planification et à l'organisation des services sociaux et de santé offerts aux collectivités qu'elle dessert. 232 210 \$ — 15 mois.

87-0249 Immunisation contre l'hépatite B (Chine).
Programme de technologie appropriée pour la santé, Canada. Étudier, dans le comté de Long An, le meilleur moyen d'intégrer la vaccination contre l'hépatite B au Programme étendu d'immunisation de la Chine. 334 525 \$ — 48 mois.

87-0250 Progrès de l'immunisation (Thaïlande).
Khon Kaen University. Permettre à sa Faculté de médecine d'étudier l'efficacité du programme étendu d'immunisation. 56 210 \$ — 18 mois.

87-0252 Diabète et hypertension chez les femmes (Trinité-et-Tobago).
Researchers for Education, Action and Development, Port of Spain. Étudier l'étiologie et le moyen de contrôler le diabète sucré et l'hypertension, deux causes majeures du décès et de l'incapacité

87-0260 Infections aiguës des voies respiratoires (Chine).
Institut de pédiatrie de la Capitale, Beijing. Créer, mettre en oeuvre et évaluer un programme complet de soins pédiatriques visant à réduire les taux de morbidité et de mortalité causés par les infections aiguës des voies respiratoires inférieures. 135 540 \$ — 36 mois.

87-0264 Contenaents pour trosses de soins de santé primitive (Global) — Phase II.
Programme de technologie appropriée pour la santé, États-Unis. Terminer la mise au point de contenants appropriés aux trosses de soins de santé primitive qu'utilisera le personnel de santé pour transporter le matériel médical. 284 690 \$ — 18 mois.

87-0269 Programme de petites subventions — recherche sur les services de santé en Afrique.
Bureau régional pour l'Organisation mondiale de la santé, Congo. Promouvoir la conduite de recherches sur les déterminants sociaux, économiques et comportementaux de la santé et sur les méthodes de gestion qui permettront d'améliorer la répartition, l'équité et l'efficacité des services de santé. 328 580 \$ — 24 mois.

87-0271 Vaccin contre la fièvre jaune (Nigéria).
Ministère de la Santé, Nigéria. Permettre aux Laboratoires fédéraux de recherche sur les vaccins de moderniser et de renforcer les installations du

Laboratoire de recherche sur le vaccin de la fièvre jaune de Yaba, Lagos; de promouvoir les règles appropriées au niveau de la production et du contrôle de la qualité et de garantir leur conformité aux normes de l'OMS et d'améliorer la fabrication de vaccins qualitativement et quantitativement en utilisant du matériel thermostable. 256 530 \$ — 36 mois.

87-0272 Réadaptation (Jamaïque)
Disabled Peoples' International, Canada. Créer une base de données pour la Jamaïque et des méthodes d'enquête sur les handicaps pouvant être utilisées par d'autres pays antillais afin d'étudier la nature et la prévalence des handicaps physiques, les connaissances et les attitudes de la société face aux handicapés. 83 450 \$ — 18 mois.

87-0274 Mortalité périnatale (Jamaïque) — Phase II.
Université des Indes occidentales, Kingston. Continuer à établir une base de connaissances destinée à améliorer les services de soins de santé maternels et infantiles pour ainsi réduire la morbidité et la mortalité périnatales. 239 700 \$ — 12 mois.

87-0281 Recherche sur les maladies tropicales (Global) — Phase VII.
Organisation mondiale de la santé (OMS), Suisse.

87-0171 Organisation et gestion des centres

de soins primaires (Zambie)

University of Zambia, Lusaka. Étudier les

mécanismes favorisant le travail d'équipe chez les

professionnels de la santé, les autres secteurs et

collectivités. 16 750 \$ — 12 mois.

87-0172 Évaluation des infirmières de soins

primaires (Indonésie)

Ministère de la Santé, Indonésie, Jakarta. Permettre

au Centre for Education of Health Manpower

d'évaluer le rendement des diplômés du programme

des infirmières de soins primaires/Perawat Kesehatan

(PK) en examinant plus particulièrement leurs tâches,

la qualité du service donné, la satisfaction qu'elles

tirent de leur travail et les facteurs qui risquent

d'affecter la qualité du programme. 213 170 \$ —

24 mois.

87-0173 Charge polluante dans la Msimbazi

(Tanzanie)

Université de Dar es-Salaam. Permettre à sa

Faculté de génie d'évaluer la nature et le niveau de

pollution de la Msimbazi, en s'attachant

particulièrement aux déchets industriels et aux

ordures ménagères. 71 760 \$ — 18 mois.

87-0187 Vaccination des écoliers contre

l'hépatite B (Égypte)

Suez Canal University, Ismailia. Étudier et

comparer la cinétique de la réaction des anticorps au

vaccin synthétique à base de levure contre le virus de

l'hépatite B chez les sujets atteints et non atteints de

bilharziose. 85 725 \$ — 24 mois.

87-0192 Croissance faible (Malawi)

Université de Malawi, Zomba. Permettre au Centre

for Social Research d'étudier la nature complexe de la

sous-alimentation au Malawi en examinant la

variation saisonnière de la croissance et du bien-être

des enfants et de leurs parents. 231 660 \$ —

87-0198 Épidémiologie de la dengue

(Malaisie) — Phase II

Université de Malaya, Kuala Lumpur. Faire des

études épidémiologiques et sérologiques

fondamentales pour suivre l'évolution du virus de la

dengue dans les régions où la maladie est endémique

et pour déterminer les facteurs de risque susceptibles

de favoriser la dengue hémorragique. 100 550 \$ —

87-0200 Formation en gestion de la santé

(Canada) — Phase III

Université de Toronto. Permettre à sa faculté de

médecine d'offrir des bourses à 24 stagiaires pour

suivre un cours en évaluation et en gestion des soins

médicaux. 396 450 \$ — 36 mois.

87-0204 Bilharziose (Égypte) — Phase IV

University of Alexandria. Permettre au High

Institute of Public Health et au Medical Research

Institute d'évaluer l'efficacité de l'*Ambrosia maritima*

comme moyen de lutte contre la schistosomiase dans

une zone habitée du delta du Nil et récemment

reconquise. 356 080 \$ — 36 mois.

87-0211 Calcul du risque annuel de

tuberculose (Botswana)

Ministère de la Santé, Gaborone. Permettre à la

Division de l'épidémiologie de calculer le risque annuel

de tuberculose chez les enfants qui commencent

l'école. 71 740 \$ — 12 mois.

87-0212 Facteurs socio-économiques

déterminants de la mortalité infantile à

Rosario (Argentine) — Phase II

Administración Médica de Rosario. Permettre à son

Centro de Estudios Sanitarios y Sociales d'analyser

l'impact des facteurs comportementaux, socio-

économiques et institutionnels sur la santé des

enfants au cours de leur première année d'existence

afin de proposer une stratégie d'amélioration des

programmes de soins donnés par les mères.

87-0221 Incubateur de culture de la

malaria (Philippines-globale)

Organisation mondiale de la santé/Bureau régional

pour le Pacifique occidental, Manille. Permettre au

Service de lutte contre la malaria du ministère de la

Santé de produire et de distribuer, d'ici un an et au

prix coûtant, aux chercheurs des pays en

développement 100 incubateurs de terrain de l'OMS

standard de l'OMS pour observer la réponse de

Plasmodium falciparum aux antipaludéens.

50 270 \$ — 12 mois.

87-0231 Ethno-médecine et soins de santé

(Kenya)

Université Kenyatta, Nairobi. Permettre à son

Département de géographie de rédiger, sur le rôle des

guérisseurs traditionnels dans les soins de santé

offerts aux ruraux, des recommandations de politique

à utiliser dans la planification et l'implantation de

meilleures stratégies de soins de santé primaire.

76 740 \$ — 24 mois.

87-0232 Aide psycho-sociale et résultat des

grossesses (Amérique latine)

Centro Rosarino de Estudios Perinatales.

Argentine, Universidad Católica de Pelotas, Brésil,

Instituto Nacional de Salud Pública, Mexique,

Ministerio de Salud Pública, Cuba. Créer un réseau

d'experts latinoaméricains en sciences biomédicales et

sociales pour étudier les effets de l'aide psychologique

sur le résultat de grossesses. 953 133 \$ — 24 mois.

87-0238 Évaluation des services de santé

dans une région de réfugiés (Soudan)

Office of the Commissioner for Refugees,

Khartoum. Permettre à l'Office et au Département de

médecine communautaire de la Faculté de médecine

à l'Université de Khartoum de faire une analyse

comparée du rendement et du fonctionnement du

système des soins de santé dans une zone de

réfugiés de la région de l'Est et dans une autre où il

n'y a pas eu arrivée massive de réfugiés.

154 295 \$ — 14 mois.

socioéconomique exhaustive du projet financé par le CRDI « Recherche sur la technologie du pompage de l'eau (Éthiopie) — Phase II », en examinant plus particulièrement la participation du village au programme de la pompe à main, l'acceptation de la technologie par la communauté et l'influence du programme sur la vie quotidienne des villageois. 105 000 \$ — 30 mois.

87-0092 Les femmes et la technologie de la pompe à main (Sri Lanka) — Phase II

Sarvodaya Economie Entreprises Développement Service, Ratmalana. Appliquer les stratégies déterminées dans le projet « Les femmes et la technologie de la pompe à main » à d'autres districts de la zone aride du Sri Lanka et installer un forage à coût modique, qui complètera le programme de Sarvodaya sur la pompe. 370 140 \$ — 36 mois.

87-0100 Mortalité infantile (Nigéria)

Université d'Ibadan. Déterminer et analyser les relations entre l'environnement, la maternité, la mortalité et la santé des enfants dans deux zones écologiques différentes du Sud-Ouest du Nigéria. 36 240 \$ — 12 mois.

87-0103 Élimination des excréments (Bolivie)

Proyecto Sucre-Ciudad Universitaria. Sucre. Améliorer les conditions sanitaires des régions à faible revenu de Sucre au moyen de latrines et d'un programme d'enseignement de l'hygiène. 83 700 \$ — 24 mois.

87-0105 Helminthes transmis au contact du sol (Indonésie) — Phase II

Université Gadjah Mada, Yogyakarta. Permettre à son Département de parasitologie de trouver qu'un programme d'amélioration de la qualité de l'eau et de l'assainissement, gère par la collectivité et complète par un programme d'enseignement de l'hygiène, peut réduire de manière durable la prévalence des maladies liées à l'eau. 54 300 \$ — 30 mois.

87-0111 Distomatoses hépatiques (Thaïlande) — Phase II *

Faculté de médecine tropicale de maintenir la prévalence des distomatoses hépatiques par un programme de nutrition et d'éducation sanitaire accompagné du traitement indiqué. 176 400 \$ — 36 mois.

87-0122 Diagnostic de la dengue (Malaisie) *

Université Saints Malaya, Penang. Permettre à l'Ecole des sciences médicales de réduire le coût et le nombre des lits d'hôpitaux occupés par des personnes atteintes de la dengue durant les épidémies en repérant les cas susceptibles de développer les manifestations hémorragiques graves et le choc hypovolémique. 135 870 \$ — 36 mois.

87-0124 Porines de la fièvre typhoïde (Chili)

Pontificia Universidad Católica de Chile, Santiago.

Évaluer la production d'anticorps en réaction aux porines de la fièvre typhoïde afin de diagnostiquer la fièvre typhoïde, en établissant sa sensibilité, sa spécificité et sa fiabilité chez les cas graves et aussi déterminer si ces anticorps sont présents chez les porteurs chroniques et les sujets vaccinés. 179 290 \$ — 24 mois.

87-0126 Filariose (République dominicaine) *

Centro de Investigaciones Biológicas y Adiestramiento. Saint-Domingue. Déterminer les caractéristiques épidémiologiques de la transmission de la filariose causée par le *Wuchereria Bancrofti* à Cabral, province de Barahona. 121 850 \$ — 24 mois.

87-0137 Leishmaniose (Éthiopie) *

Université d'Addis-Ababa. Permettre à l'Institut de pathobiologie de déterminer l'étendue de la leishmaniose viscérale et ses conséquences socio-économiques chez les nouvelles populations des régions agricoles du Sud-Ouest de l'Éthiopie afin de recommander des stratégies d'intervention. 216 085 \$ — 36 mois.

87-0138 Neurocysticercose (Pérou)

Universidad Peruana Cayetano Heredia, Lima. Mettre au point une méthode sérologique rapide à utiliser dans le diagnostic, le traitement et l'épidémiologie de la neurocysticercose. 161 140 \$ — 18 mois.

87-0153 Indépendance d'action des collectivités (Thaïlande)

Université Chulalongkorn, Bangkok. Permettre à sa faculté de génie de développer la capacité des collectifs de choisir, planifier, construire et gérer un programme d'eau et d'hygiène en fonction de leurs ressources et de leurs compétences. 52 480 \$ — 18 mois.

87-0154 Diagnostic du SIDA (Global)

Program for Appropriate Technology in Health (PATH), États-Unis. Mettre au point un test rapide et simple pour détecter les anticorps de la famille des virus de l'immunodéficience humaine, les agents étiologiques du syndrome de l'immunodéficience acquise. 47 260 \$ — 12 mois.

87-0155 Hygiène du travail dans l'industrie des métaux (Mexique)

Universidad Autónoma Metropolitana-Xochimilco, Mexico. Valider la méthodologie participative et éducative qui sert dans la première phase de ce programme de recherche ayant pour but d'étudier les conditions de travail face à la santé des travailleurs. 90 760 \$ — 18 mois.

87-0158 « Trou » de fontanelle (Libéria)

Cuttington University College, Monrovia. Étudier les croyances, les comportements et les pratiques populaires face au phénomène du « trou » de fontanelle afin de préparer une trousse éducative dont se servira le Ministère de la santé. 38 860 \$ — 16 mois.

87-0004 Pompes à main en CPV (Chine) *

Ministère de l'industrie et de la construction de machines. Beijing. Permettre à l'Académie chinoise des sciences de la mécanisation agricole d'adapter la pompe CRDI-UM en CPV pour évaluer la possibilité de la fabriquer à grande échelle en Chine et d'en généraliser l'emploi. 249 880 \$ — 24 mois.

87-0033 Les femmes et le développement

Institute of Southeast Asian Studies, Singapour, six institutions de l'Asie du Sud-Est et du Pacifique. Planifier, mettre en oeuvre et évaluer un programme de recherche participative visant le développement de la santé communautaire et la participation des femmes de différents milieux ruraux de l'Asie et du Pacifique. 317 156 \$ — 36 mois.

87-0037 Gestion de la santé des pauvres dans quatre villes de l'Asie

Institute of Southeast Asian Studies, Singapour. Etablir un programme qui permette de répondre aux besoins de la population urbaine pauvre de certains pays en oeuvre et évaluer un programme de l'Asie du Sud-Est (ANASE) en matière de santé. 230 250 \$ — 24 mois.

87-0043 Hépatite B

(Saint-Christophe-et-Nevis) Caribbean Epidemiology Centre, Trinité-et-Tobago. Evaluer la réponse immunitaire des enfants à deux vaccins contre l'hépatite B en fonction de la dose à administrer et du coût. 259 965 \$ — 24 mois.

87-0044 Initiation aux problèmes majeurs de santé dans les programmes d'études de médecine (Global) — Phase II

Université McMaster, Canada. Permettre à sa Faculté des sciences de la santé d'accueillir quatre boursiers qui participeront au projet sur les problèmes majeurs de santé dans les études médicales, projet du réseau des institutions d'enseignement des sciences de la santé pour les collectivités. 45 000 \$ — 12 mois.

87-0046 Epidémiologie des maladies diarrhéiques (Indonésie) *

Universitas Andalas, Padang. Entreprendre une étude épidémiologique des maladies diarrhéiques dans la région rurale de Kecamatan Kuranji, à l'Ouest de Sumatra. 163 700 \$ — 24 mois.

87-0060 Guide de construction de RFCEP (Philippines)

Kabalikat Ng Pamilyang Pilipino (KNPP), Manille. Promouvoir l'utilisation des réservoirs en ferrociment servant à la collecte des eaux de pluie. 25 490 \$ — 28 mois.

87-0061 Lutte contre l'helminthiase (Sri Lanka)

Université de Ruhuna, Galle. Permettre à sa Faculté de médecine d'étudier la fréquence et la gravité des cas de parasitose causée par des

helminthes transmis par voie cutanée au contact du sol, en vue d'améliorer le bien-être des populations rurales du Sud de Sri Lanka. 40 020 \$ — 36 mois

87-0073 Changements dans l'alimentation et le mode de vie (Maurice)

Ministère de la Santé, Port-Louis. Etudier l'alimentation et le mode de vie de la jeunesse mauricienne et plus spécifiquement de sous-groupes présentant un intérêt particulier. 28 965 \$ — 12 mois.

87-0080 Participation de la collectivité à la promotion de la santé (Ghana)

Ecole de médecine de l'Université du Ghana, Accra. Etudier comment les populations rurales participent au développement des services de santé et à la prévention des maladies en milieu rural. 15 183 \$ — 16 mois.

87-0081 Waterlines (Global) — Phase II

Intermediate Technology Publications Limited, Royaume-Uni. Financer les activités de mise en marché et de publicité de *Waterlines* pour que ce magazine puisse continuer à diffuser de l'information jusqu'à la fin de la Décennie internationale de l'eau potable et de l'assainissement. 95 000 \$ — 36 mois.

87-0084 Technologie du pompage de l'eau (Malaisie) — Phase III

Université de Malaya, Kuala Lumpur. Créer un centre régional de R&D en technologie de la pompe à main ; utiliser ce centre comme lieu de formation pour la fabrication, l'assemblage, l'installation et l'entretien de la pompe UNIMADE et établir un réseau de petites et grandes entreprises de production de pompes à main dans la région et ailleurs. 1 129 040 \$ — 36 mois.

87-0085 Essais de pompes à main dans des conditions réelles (Kenya)

Kenya Medical Research Institute, Nairobi. Permettre au Centre de recherche médicale d'installer, de tester et d'évaluer 50 pompes à main UNIMADE Mark III dans divers puits (puits traditionnels et puits tubulaires) et de comparer la qualité de l'eau et le rendement de la pompe en fonction du type de puits. 200 090 \$ — 24 mois.

87-0086 Surveillance des germes pathogènes (Zaire)

Comité de développement socio-économique des Bahais du Haut Zaïre, Kisangani. Permettre au Département de microbiologie de l'Université de Kisangani d'étudier la survie des germes pathogènes dans les excréments et le sous-sol des cabinets à fosse afin de déterminer le modèle et l'entretien (volume maximal de la fosse et fréquence de vidange) et réduire les risques pour la santé associés à la pollution de l'eau souterraine ou à la manipulation du contenu de la fosse. 98 690 \$ — 24 mois.

87-0091 Etude socioéconomique du projet de pompe à main de l'EWCA (Ethiopie) *

Université d'Addis-Ababa. Permettre à l'Institute of Development Research de faire une étude

Mettre au point des critères de sélection et trier le plasma germinatif du maïs en laboratoire et sur le terrain, en fonction de sa résistance aux principaux ravageurs du maïs stocké après la récolte.

278 400 \$ — 36 mois.

87-1011 Disponibilité de phosphore
(Brésil-Chana -Canada)

Universidade Federal Pernambuco, Recife, Université du Ghana. Accra, Saskatchewan Institute of Pedology, Saskatoon. Recommander des méthodes culturelles et des méthodes de gestion des engrais qui favoriseront la fertilité des sols due au phosphore et la préservation des matières organiques dans les sols, dans les systèmes culturaux à faible niveau d'apports agricoles.

280 400 \$ — 36 mois.

87-1014 Application de la méthode ELISA
au *Bacillus thuringiensis* (Global-Canada)

Université Western Ontario, London. Permettre à son Département de génie chimique et biochimique et à son Département de microbiologie et d'immunologie de mettre au point un test immunochimique qui permettra d'identifier le *Bacillus thuringiensis* dans des isolats sur le terrain et d'avoir un meilleur contrôle de la qualité durant la production.

28 600 \$ — 12 mois.

87-1022 Pesticides d'origine végétale
(Philippines-Canada)

Philippine Council for Agriculture and Resources Research and Development, Los Baños, Université d'Ottawa. Déterminer et mettre au point des pesticides d'origine végétale prometteurs que les petits paysans pourront utiliser dans le cadre de programmes intégrés de lutte contre les insectes nuisibles.

301 800 \$ — 36 mois.

87-1026 *Bacillus thuringiensis*
(Mexique-Nicaragua-Canada)

Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional, Mexico. Ministerio de Desarrollo Agropecuario y Reforma Agraria, Managua. Université Western Ontario, London. Développer la capacité du Nicaragua et du Mexique de produire à peu de frais de bons insecticides biologiques à l'aide du *Bacillus thuringiensis*.

353 300 \$ — 24 mois.

87-1027 Pesticides (Thaïlande-Canada) — Phase II

Université Chiang Mai, Université de la Colombie-Britannique, Vancouver. Mettre au point et éprouver sur le terrain des pesticides naturels prometteurs qui seront employés en aquaculture en Thaïlande.

277 400 \$ — 24 mois.

87-1028 Reproduction induite (Chine-Canada) — Phase II

Université de Zhongshan, Guangzhou, Université de Guelph, Université de l'Alberta, Edmonton. Faire progresser le Département de biologie de l'Université de Zhongshan qui deviendra un centre de recherche appliquée sur la physiologie hormonale des poissons.

287 500 \$ — 24 mois.

426 700 \$ — 36 mois.

87-1031 Le bois et le bâtiment
(Chili-Canada)

Instituto Forestal, Santiago, Université du Nouveau-Brunswick, Fredericton. Établir et diffuser l'information technique voulue pour favoriser une utilisation locale du bois de pin du Chili dans l'industrie locale du bâtiment, une ressource que l'on trouve en abondance dans ce pays.

426 700 \$ — 36 mois.

87-1040 Séchoirs à convection libre
(Afrique occidentale-Canada) — Phase II

Ministère de l'Agriculture et des richesses naturelles, Sierra Leone, Centre d'études et de recherches sur les énergies renouvelables, Sénégal, Université du Bénin, Togo, Centre national d'études et d'expérimentation du machinisme agricole, Cameroun, Université Ahmadu Bello, Nigéria et Université Queen, Kingston. Créer des séchoirs à convection libre améliorés utilisables sur les fermes, et encourager leur utilisation en Afrique de l'Ouest.

268 400 \$ — 36 mois.

87-1043 Lutte biologique contre la psylle
du *Leucaena* (Asie-Canada)

Philippine Council for Agriculture and Resources Research and Development, Institut central de recherches sur les cultures vivrières, Indonésie, Institut international de lutte biologique des CAB, Royaume-Uni, Centre de l'environnement de l'Alberta, Canada. Réduire les populations de psylle au niveau où elles ne causent plus de dommages d'ordre économique et social, à l'aide d'ennemis naturels importés conjuguée à d'autres méthodes.

256 500 \$ — 36 mois.

87-1049 Fertilité et érosion des sols
(Népal-Canada)

Université de Colombie-Britannique, Vancouver, Integrated Survey Section, Katmandu. Déterminer et quantifier les causes et la nature de l'érosion des sols, de la baisse de fertilité des sols et du transport de sédiments dans les petits bassins hydrographiques des collines du Népal et développer des moyens d'améliorer la production de la biomasse de façon soutenue.

238 600 \$ — 36 mois.

87-1050 Oursins (Barbade-Canada)

Université des Indes occidentales, Cavehill, Université McGill, Montréal. Déterminer la structure et la dynamique du peuplement des oursins (*Trypanistes ventriosus*) à La Barbade et dans les îles avoisinantes, accentuer le rétablissement du peuplement d'oursins et construire des modèles sur lesquels fonder la gestion scientifique de la pêche des oursins.

74 200 \$ — 36 mois.

87-0266 Pisciculture (Mauritanie) Centre national de recherches océanographiques et des pêches, Nouadhibou. Maximiser la production de poisson d'eau douce sur la rive mauritanienne du fleuve Sénégal. 173 800 \$ — 36 mois.

87-0267 Multiplication végétative (Sénégal) — Phase II Institut sénégalais de recherches agricoles, Dakar. Permettre au Département de recherches sur les productions forestières de produire par le moyen de techniques de multiplication végétative (bouturage, greffe et culture *in vitro*), des clones à haut rendement dont l'utilisation à grande échelle permettra d'augmenter la production des plantations forestières. 126 600 \$ — 24 mois.

87-0275 Installation pilote de transformation du sorgho (Kenya) Institut de recherche et de développement industriels, Nairobi. Favoriser une plus grande utilisation du sorgho dans les villes en région sèche du Kenya en utilisant de petits décortiqueurs. 200 900 \$ — 36 mois.

87-0277 Rizipisciculture (Indonésie) Agency for Agricultural Research and Development. Permettre à l'Institut de recherche sur les cultures vivrières de Sukamandi et à l'Institut de recherche sur la pêche en eau douce d'améliorer les systèmes de rizipisciculture intégrés en Indonésie. 410 000 \$ — 36 mois.

87-0285 Etude de marché du sorgho perlé (Kenya) Kenya Industrial Research and Development Institute, Nairobi. Etudier l'accueil réservé par les ménages de certaines régions urbaines du Kenya au sorgho entier décortiqué. 46 900 \$ — 15 mois.

87-0290 Systèmes pastoraux maghrébins (Tunisie) Ministère de l'Agriculture, Tunisie. Permettre à l'Institut des régions arides d'identifier et de tester des interventions qui permettent une amélioration des conditions de vie et de travail des populations de ces zones et dans le même temps à la stabilité de l'environnement. 71 400 \$ — 15 mois.

87-0291 Systèmes pastoraux maghrébins (Algérie) Ministère de l'Enseignement supérieur, Alger. Permettre au Centre de recherches en économie appliquée pour le développement (CREAD) d'identifier et de tester des interventions qui permettent une amélioration des conditions de vie et de travail des populations de ces zones et du même coup une amélioration de la stabilité de l'environnement.

87-0296 Atelier sur l'utilisation des résultats de la recherche (Colombie) Permettre à la Division des sciences de l'agriculture, de l'alimentation et de la nutrition du CRDI de créer une stratégie visant une meilleure diffusion des résultats de la recherche (Colombie).

87-1010 Résistance au charançon (Mexique-Zimbabwe-Canada) — Phase II Centro Internacional de Mejoramiento de Maíz y Trigo, Mexico, Instituto Politécnico Nacional, Mexico, Université du Zimbabwe, Harare, Université d'Ottawa.

et moyennes installations de traitement de la féverole.

41 300 \$ — 12 mois.

87-0230 Le buffle comme animal de trait

(Inde) *

Indian Council for Agricultural Research, New Delhi. Permettre au Central Institute for Research on

Buffaloes de déterminer quelles rations maximiseront

la capacité de trait du buffle des rivières (Murrah), et

d'obtenir ainsi les données de base nécessaires à

l'élaboration d'interventions visant à améliorer la

traction animale sur les petites exploitations.

48 600 \$ — 12 mois.

87-0233 Réseau de recherches sur les

pâturages en région tropicale (Amérique

latine) — Phase III *

Centre international d'agriculture tropicale (CIAT),

Col. Améliorer les systèmes d'élevage dans les

régions tropicales de l'Amérique latine en introduisant

des herbes fourragères et des légumineuses

économiques et renforcer la capacité nationale en

matière de recherches sur les pâturages tropicaux.

671 600 \$ — 36 mois.

87-0235 Élevage et aquaculture intégrés

(Cameroun) *

Ministère de l'Élevage, des Pêches et des Industries

animales, Yaoundé. Permettre à son Département

des pêches de mettre au point des méthodes

d'élevage et d'aquaculture intégrés, appropriées au

niveau technique et socio-économique. 249 800 \$ —

87-0236 Culture tissulaire (Inde) *

Tata Energy Research Institute, New Delhi. Mettre

au point des méthodes de culture tissulaire convenant

aux essences d'arbre et utilisées dans le cadre des

programmes de sylviculture communautaire et de

développement des terres incultes. 157 600 \$ —

36 mois.

87-0237 Systèmes culturaux (Chine) —

Phase II *

Académie chinoise des sciences agricoles, Beijing.

Permettre à l'Institut de sélection et de production

végétale de promouvoir la recherche sur les systèmes

culturaux en Chine. 489 000 \$ — 36 mois.

87-0240 Systèmes de culture et d'élevage

(Asie) — Phase II *

Institut international de recherches sur le riz,

Manille, Université des Philippines à Los Baños,

Institut de zootéchnie. Augmenter la productivité, les

revenus et le taux d'emploi des petites exploitations

agricoles de l'Asie, par la conduite de travaux de

recherche sur les systèmes culturaux axés sur

l'interaction de la culture et de l'élevage.

87-0242 Pêches artisanales Casamance

(Sénégal) — Phase II *

Dakar. Permettre au Centre de recherches

océanographiques de Dakar-Thiaroye, de fournir le

soutien scientifique nécessaire aux programmes

d'aménagement et de développement des pêches en

Casamance afin d'améliorer les revenus des pêcheurs

et des paysans pêcheurs. 270 500 \$ — 36 mois.

87-0246 Légumes (Chine) — Phase II *

Asian Vegetable Research and Development Center

(AVRDC), Thaïlande. Augmenter la production

légumière en Chine au moyen de travaux de

recherches coopératifs avec l'Académie chinoise des

sciences agricoles et le ministère de l'Agriculture, de

l'élevage et des Pêches, par le biais du Programme

régional de diffusion et de formation de l'AVRDC.

454 600 \$ — 36 mois.

87-0254 Systèmes de production de viande

et de lait de bovins (Guatemala) —

Phase II *

Institut interaméricain de coopération pour

l'agriculture, Guatemala. Permettre à l'Institut de

ciencia y Tecnologías Agrícolas, à la Dirección General

de Servicios Pecuarios d'améliorer les petits systèmes

de production de viande et de lait de bovins dans six

régions du Guatemala. 404 000 \$ — 36 mois.

87-0255 Oléagineux (Éthiopie) *

Institut de recherche agricole, Addis-Ababa.

Sélectionner des cultivars d'oléagineux plus nutritifs et

à rendement plus élevé et améliorer leur productivité

au moyen de meilleures méthodes culturales.

465 900 \$ — 36 mois.

87-0257 Utilisation du sorgho (Tanzanie) —

Phase II *

Sokoine University of Agriculture, Morogoro.

Étendre l'utilisation du sorgho en Tanzanie.

115 300 \$ — 36 mois.

87-0258 Canards de Barbarie (Thaïlande) *

Institut asiatique de technologie, Bangkok. Établir,

à partir d'aliments locaux, des régimes alimentaires

convenant à la production de canards intégrés à des

systèmes de production de canards et de poisson.

122 900 \$ — 36 mois.

87-0261 Triticale (Syrie) *

Université d'Alap. Permettre à sa Faculté

d'agriculture de renforcer ses capacités de recherche

dans le domaine de la production et de l'utilisation du

87-0262 Systèmes intégrant petits

ruminants et cocotiers (Philippines)

Philippine Council for Agriculture and Resources

Research and Development, Los Baños. Permettre au

Département de recherche sur le bétail d'élaborer les

stratégies nécessaires à l'intégration des petits

ruminants au système de production de cocotiers.

160 600 \$ — 36 mois.

87-0263 Forêtierie irriguée (Pakistan) *

Institut forestier du Pakistan, Peshawar. Optimiser

les rendements en biomasse des plantations

forestières irriguées du Pakistan en améliorant les

méthodes de gestion et d'utilisation de l'eau.

245 400 \$ — 60 mois.

du Sénégal, Thiès. Mettre au point et tester une formule originale d'épargne et de crédit dont la clé du succès réside dans l'alliance entre une banque rurale et une fédération d'organisations paysannes.

276 000 \$ — 38 mois.

87-0182 Analyse dynamique des données

sur les exploitations agricoles (Pérou)
Centro de Estudios y de Desarrollo Agrario del Perú, Lima. Etablir et éprouver la méthode pour créer, rassembler et analyser des petites exploitations agricoles de quatre régions écologiques du Pérou de telle sorte que ces données seront utiles aux projets de recherche appliquée. 87 200 \$ — 12 mois.

87-0185 Nouvelle politique agricole

(Sénégal)
Institut sénégalais de recherches agricoles, Dakar. Analyser la réponse à la nouvelle politique agricole dans le bassin arachidier du Sénégal afin d'envisager des améliorations possibles. 198 270 \$ — 36 mois.

87-0188 Groupe de travail sur la foresterie

(Afrique)
Banque mondiale, Washington, D.C., E.-U. Permettre au Programme spécial pour la recherche agronomique en Afrique (SPAR) d'exécuter les travaux dont il a été chargé et d'appuyer la participation de représentants africains à ses travaux. 40 000 \$ — 12 mois.

37-0190 Réseau des sciences sociales sur

les pêches (Asie) — Phase III
International Centre for Living Aquatic Resources Management, Philippines. Développer les compétences en recherches sociales sur les pêches pour les combiner à la biologie et aux techniques que l'on applique à la prise de décision et à la planification de l'exploitation des ressources naturelles en Asie. 600 000 \$ — 36 mois.

87-0191 Culture en couloir (Mali)

Centre international pour l'élevage en Afrique (CPEA), Ethiopie. Améliorer la productivité de l'élevage et des cultures vivrières dans les systèmes agropastoraux au Mali par l'intégration d'espèces ligneuses fourragères aux cultures annuelles. 99 300 \$ — 36 mois.

87-0197 Réseau de la mycorhizie (Asie)

Tata Energy Research Institute, Inde. Renforcer la recherche, favoriser la coopération et l'échange d'information et de plasma germinatif et faciliter le transfert de technologie par la création d'un réseau de recherche de la mycorhizie en Inde. 189 200 \$ — 36 mois.

37-0201 Réseau de la banane et de la

banane plantain (Global) — Phase IV
Réseau international pour l'amélioration de la banane plantain (INIBAP), France. Continuer à appuyer sa mise sur pied et ses activités. 150 000 \$ — 12 mois.

87-0205 Légumineuses alimentaires

(Tunisie)
Institut national de la recherche agronomique de

Tunisie, Ariana. Accroître et améliorer la production de légumineuses alimentaires, particulièrement la féverole, le pois chiche et la lentille dans les grandes zones de production de Tunisie alimentées par les pluies. 361 100 \$ — 36 mois.

87-0216 Prix du riz — réaction des paysans

(Asie)
Institut international de recherche sur le riz, Philippines. Déterminer la réaction des ménages ruraux au long déclin du prix du riz en Thaïlande et en Indonésie. 38 900 \$ — 18 mois.

87-0222 Élevage des chèvres et des

moutons (Zimbabwe) — Phase II
Université du Zimbabwe, Harare. Permettre à son Département de zootechnie de mettre au point et d'introduire des méthodes de gestion et d'alimentation convenant aux petits ruminants des régions communales du Zimbabwe. 300 100 \$ — 36 mois.

87-0223 Le buffle comme animal de trait

(Thaïlande)
Université Kasetsart, Bangkok. Évaluer le besoin et le potentiel de traction animale dans les petites exploitations agricoles et mener une étude préliminaire sur les possibilités d'accroître le potentiel de traction animale au moyen d'une meilleure alimentation. 156 600 \$ — 24 mois.

87-0224 Systèmes de production laitière

(Ethiopie)
Institute of Agricultural Research, Addis-Ababa. Accroître la production laitière dans deux régions de l'Ethiopie et renforcer ses capacités de mener des recherches zootechniques. 370 900 \$ — 36 mois.

87-0225 Systèmes de production de viande

et de lait de bovins (Botswana) — Phase II
Ministère de l'Agriculture, Gaborone. Permettre à son Département de recherche agricole d'accroître la production laitière des petits éleveurs péribains et de renforcer les capacités des instituts nationaux de mener des recherches sur les systèmes de production animale au Botswana. 395 300 \$ — 36 mois.

87-0226 Les femmes et les systèmes

culturaux (Thaïlande)
Ministère de l'Agriculture et des Coopératives, Bangkok. Permettre à l'Institut de recherche sur les systèmes cultureux d'améliorer les conditions sociales et économiques des familles rurales en Thaïlande en mettant à la disposition des femmes des technologies financièrement abordables. 95 800 \$ — 24 mois.

87-0227 Foresterie sociale (Lesotho)

Ministère de l'Agriculture, Maseru. Permettre à sa Division de la foresterie de mettre sur pied un programme efficace de foresterie sociale dans tout le Lesotho. 25 600 \$ — 5 mois.

87-0229 Traitement de la féverole

(Egypte) — Phase II
Université d'Alexandrie. Permettre à sa faculté d'Agriculture de mettre au point et d'éprouver un meilleur équipement et de meilleurs procédés de production de falcet et de medammis par des petites

préservant les ressources du bassin hydrographique. 465 000 \$ — 36 mois.

87-0123 Conseiller en économie de post-récolte (Asie) — Phase II

Centre d'études supérieures et de recherche agricole de l'Asie du Sud-Est de l'Organisation des ministres de l'éducation des pays du Sud-Est asiatique, Philippines. Continuer à fournir au SEARCA les services d'un chercheur expérimenté qui développera les capacités de recherche et de formation du SEARCA en économie post-récolte et en agro-industrie. 177 000 \$ — 24 mois.

87-0128 Lates niloticus (Tanzanie)

Institut de recherche sur les pêches de la Tanzanie, Dar-es-Salaam. Développer des méthodes et des pratiques de pêche qui permettront d'exploiter le plus longtemps possible les ressources en poisson du lac Victoria en Tanzanie. 182 200 \$ — 36 mois.

87-0130 Entreposage du maïs (Togo) — Phase II

Université du Bénin, Lomé. Permettre à l'École supérieure d'agronomie d'inciter les agriculteurs à adopter les améliorations apportées aux systèmes traditionnels de stockage du maïs dans le Sud du Togo pour accroître la qualité et la quantité de maïs stocké dans les fermes. 249 400 \$ — 39 mois.

87-0131 Programme de post-récolte des céréales de l'ASEAN (Asie du Sud-Est)

Ministère de l'Agriculture et des Coopératives, Thaïlande. Permettre au Département d'agriculture d'améliorer les systèmes post-récolte des céréales et des légumineuses des pays de l'Association des nations de l'Asie du Sud-Est (ANASE) pour aider les fermiers et les petits entrepreneurs à fournir des produits de bonne qualité et à mieux gagner leur vie. 250 000 \$ — 60 mois.

87-0132 Légumineuses alimentaires (Mali) — Phase III

Ministère de l'Agriculture, Bamako. Permettre à l'Institut d'économie rurale de mettre au point des élevés et stable, résistants à la sécheresse, aux insectes et aux maladies et possédant une qualité acceptable par les paysans. 259 800 \$ — 36 mois.

87-0133 Gestion intégrée des ravageurs (Philippines)

University of the Philippines, Los Baños. Améliorer la santé, la productivité et le revenu des ménages ruraux dans les régions rizicoles des Philippines en y introduisant les techniques de gestion intégrée des ravageurs. 108 100 \$ — 24 mois.

87-0135 Recherche sur le sésame en ferme (Inde)

Tamil Nadu Agricultural University, Coimbatore. Permettre à Krishni Vignan Kendra d'augmenter la production du sésame par l'application de systèmes culturels à base de sésame qui contribueront à améliorer les conditions économiques générales des petits cultivateurs de sésame dans trois régions cibles

de Tamil Nadu. 160 700 \$ — 60 mois.

87-0149 Systèmes de mariculture (Chili)

Universidad Austral de Chile, Valdivia. Permettre à l'Institut de recherches marines d'établir un système intégré de mariculture comme moyen de promouvoir le développement des communautés rurales de l'île de Chiloe. 404 400 \$ — 36 mois.

87-0151 Développement de l'aquiculture (Colombie)

Fondo Colombiano de Investigaciones Científicas y Proyectos Especiales Francisco José de Caldas, Bogotá. Permettre à la station Alto Magdalena de continuer au développement de l'aquiculture pour les petits et moyens producteurs dans la région sud-est de la Colombie par l'adaptation et le transfert de technologie. 269 000 \$ — 24 mois.

87-0161 BAIF - Aide aux institutions (Inde)

Bharatiya Agro-Industries Foundation, Pune. Créer un institut de recherche pour le développement qui sera chargé de créer un centre de ressources d'information et de faire des recherches sur les systèmes de soins, de production et de post-production agricoles. 1 855 000 \$ — 60 mois.

87-0168 Mécanisation et emploi agricole (Maroc)

Centre international de recherche agricole dans les zones arides, Syrie. Aider la recherche agronomique et les institutions de développement à élaborer des solutions de rechange appropriées dans les domaines de la mécanisation et de l'emploi agricoles. 64 700 \$ — 9 mois.

87-0170 Paulownia (Pakistan)

Pakistan Forest Institute, Peshawar. Evaluer la possibilité d'incorporer des essences de paulownia aux systèmes agroforestiers. 178 200 \$ — 36 mois.

87-0174 Olives (Rive occidentale du Jourdain)

Arab Scientific for Research and Transfer of Technology, El Birch. Améliorer la production et la capacité de traitement des récoltes d'olives sur la rive occidentale du Jourdain. 96 600 \$ — 36 mois.

87-0177 Agroforesterie (Pérou) — Phase II

Instituto Nacional de Investigación y Promoción Agropecuaria, Lima. Déterminer et éprouver d'autres systèmes de production agroforestière convenant au haut bassin péruvien de l'Amazonie et renforcer la capacité nationale de recherche en agroforesterie. 376 600 \$ — 36 mois.

87-0179 Bambou (Malaisie)

Forest Research Institute of Malaysia, Selangor. Améliorer et promouvoir la production, l'exploitation et l'utilisation du bambou en Malaisie à l'aide de techniques scientifiques valables. 170 000 \$ — 36 mois.

87-0180 Épargne et crédit paysan (Sénégal)

Fédération des organisations non gouvernementales

87-0034 Algues (Philippines)
Université des Philippines, Quezon City. Permettre au Marine Science Institute de créer les compétences techniques et les installations de recherche nécessaires pour appuier un programme dynamique de recherche et de valorisation des algues dans le pays. 406 700 \$ — 36 mois.

87-0035 Algues (Chili)
Universidad de Concepcion. Tenir le Troisième symposium sur les algues visant à étudier l'état de la recherche sur le sujet au Chili et préparer un document faisant état des résultats du symposium. 17 200 \$ — 3 mois.

87-0036 Aliments pour nourritsions (Inde)
Université Maharaja Sayajirao de Baroda. Evaluer et promouvoir, de façon systématique, l'application d'une alimentation riche en amylose pour les nourritsions en Inde. 208 400 \$ — 36 mois.

87-0038 Amélioration de l'arachide (Mozambique) — Phase III
Universidade Eduardo Mondlane, Maputo. Aider les petits paysans en mettant au point de meilleures méthodes culturales et des variétés végétales adaptées à leurs besoins et développer la main-d'œuvre scientifique et les compétences institutionnelles nécessaires. 501 600 \$ — 36 mois.

87-0039 Graines oléagineuses (Sri Lanka) — Phase II
Département de l'Agriculture, Peradeniya. Elaborer un programme de recherche sur les graines oléagineuses à Sri Lanka afin de créer des variétés améliorées et de meilleures techniques pour la culture pluviale à l'intention des paysans des zones sèches et intermédiaires, là où la production annuelle de graines post-production de l'arachide. 213 500 \$ — 24 mois.

87-0041 Mécanisation de la culture de l'arachide (Thaïlande) — Phase III
Université Khon Kaen, ministère de l'Agriculture et des Coopératives, Bangkok. Améliorer la productivité des terres et de la main-d'œuvre, améliorer la qualité de l'arachide, augmenter le revenu des paysans par la mécanisation appropriée de la production et de la post-production de l'arachide. 213 500 \$ — 24 mois.

87-0048 Systèmes de production de chèvres (Népal)
Ministère de l'Alimentation et de l'Agriculture, Katmandou. Permettre à son département chargé de l'amélioration des élevages et de la santé animale de recenser et d'évaluer l'actuelle production caprine du Népal et de mettre à l'essai des méthodes appropriées en vue de l'améliorer. 80 500 \$ — 36 mois.

87-0063 Plasma germinatif de sesbanie (Afrique)
Centre International de l'élevage de l'Afrique (CIEA), Ethiopie. Améliorer le plasma germinatif de sesbanie dont il dispose et le distribuer à plusieurs autres pays africains aux fins d'évaluation. 11 000 \$ — 2 mois.

87-0070 Recherche sur le sésame (Inde)
Tamil Nadu Agricultural University, Coimbatore. Déterminer et évaluer les obstacles particuliers à la production du sésame et élaborer une méthodologie utilisable par les programmes d'amélioration du sésame en finançant six études de doctorat sur le sujet. 96 900 \$ — 48 mois.

87-0079 Régénération des forêts (Chili) — Phase II
Instituto Forestal, Santiago. Mettre au point des techniques sylvicoles aux fins de régénération et de gestion des boisés autochtones de la zone semi-aride au centre du Chili et fournir un soutien technique à d'autres projets de recherche du CRDI sur le reboisement en Amérique latine. 395 200 \$ — 36 mois.

87-0082 Société des pêcheries asiatiques — petites subventions (Asie)
Société des pêcheries asiatiques, Philippines. Octroyer de petites subventions de recherche à des jeunes scientifiques pour qu'ils entreprennent des travaux sur les pêches dans les pays d'Asie en développant. 420 700 \$ — 36 mois.

87-0110 Amélioration des sols par les arbres (Zimbabwe)
Université de Zimbabwe, Harare. Etudier les effets des arbres sur la fertilité des sols et le rendement des cultures. 131 800 \$ — 36 mois.

87-0113 Systèmes de post-récolte (Chine)
Université agricole de Zhejiang, Hangzhou. Permettre au Centre de recherche sur la technologie post-récolte de définir les systèmes post-récolte des grains et de déterminer la technologie qui augmenterait la rentabilité économique de ces systèmes. 105 100 \$ — 24 mois.

87-0114 Agroforesterie (Kenya) — Phase II
Ministère de l'Environnement et des Ressources Naturelles, Nairobi. Permettre au Kenya Forest Research Institute de continuer de travailler aux systèmes d'agroforesterie pour les régions semi-arides du Kenya et pour les régions semblables d'autres pays de l'Afrique de l'Est en vue d'améliorer la qualité de vie des populations. 345 200 \$ — 36 mois.

87-0115 Mini décorateurs (Gambie) — Phase II
Catholic Relief Services, Banjul. Promouvoir la fabrication locale et l'utilisation du décorateur MINI-CRS. 140 000 \$ — 30 mois.

87-0118 Systèmes culturaux (Jamaïque) — Phase II
Institut interaméricain de coopération pour l'Agriculture, Kingston. Permettre au ministère de l'Agriculture de développer des systèmes de production économiquement viables que les petits agriculteurs accepteraient et qui augmenteraient et stabiliseraient les revenus des fermes tout en

autres pays africains aux fins d'évaluation. 11 000 \$ — 2 mois.

87-0013 Utilisation du bois de palmier (Asie)
Forest Products Research and Development Institute, Philippines ; Asian and Pacific Coconut Community, Indonésie ; Forest Research Institute, Malaisie et Université Kasetsart, Thaïlande. Mettre au point des techniques pour utiliser les troncs de palmier et promouvoir leur transformation et leur utilisation par les petites et moyennes entreprises de la région de l'Asie et du Pacifique. 412 000 \$ — 36 mois.

87-0014 Boisement des zones sèches (Zimbabwe) — Phase II
Zimbabwe Forestry Commission, Harare. Permettre au Forest Research Centre de fournir à la population locale le bois de chauffage et les matériaux de construction dont elle a besoin en établissant des plantations forestières dans les régions semi-arides et arides du pays et d'intégrer ces plantations aux activités pastorales et agricoles régionales. 281 500 \$ — 48 mois.

87-0015 *Acacia alba* (Burkina Faso)
Ministère de l'Enseignement supérieur et de la Recherche scientifique, Ouagadougou. Permettre à l'Institut de recherche en biologie et écologie tropicale de mettre à la disposition des paysans des plants d'*Acacia alba* dont la provenance est connue, à faible variabilité intraspécifique et à production élevée. 110 400 \$ — 36 mois.

87-0016 Remplacement de la canne à sucre (Equateur)
Instituto Interamericano de Cooperación para la agricultura, Quito. Permettre au Centro de Reconversión Económica del Azuay, Cañar y Morona, Santiago, de trouver des produits agricoles pour remplacer la canne à sucre que cultivent actuellement les paysans de la vallée de Yunguilla et de maintenir ou d'améliorer le revenu familial et l'utilisation de la main-d'oeuvre. 219 800 \$ — 36 mois.

87-0018 Systèmes d'exploitation agricole (Costa Rica) — Phase II
Universidad de Costa Rica, San José. Mettre au point de meilleures techniques de production végétale et animale à l'intention des petits paysans des basses terres en milieu tropical. 369 500 \$ — 36 mois.

87-0019 Essai du décoriqueur (Niger)
Institute for the Study and Application of Integrated Development (ISAID), Niamey. Permettre à l'ISAID d'introduire le décoriqueur Mini-CRS au milieu rural. 70 000 \$ — 24 mois.

87-0021 Cultures en montagne (Népal)
Département de l'Agriculture du Népal, Katmandou. Permettre à la Division de botanique agricole d'établir un programme d'amélioration des cultures en montagne afin d'accroître et de maintenir la production et la productivité de céréales dont la culture a été négligée en montagne. 485 000 \$ — 36 mois.

87-0022 Amélioration des pâturages (Zimbabwe)
Ministère des terres, de l'agriculture et de la nouvelle colonisation, Harare. Permettre à son département de recherche et des services aux spécialistes de mettre au point des techniques de production fourragères appropriées pour les communes du Zimbabwe et de distribuer le plasma communautaire de légumineuses fourragères. 188 600 \$ — 36 mois.

87-0023 Alimentation des vaches laitières (Tanzanie) — Phase II
Sokoine University of Agriculture, Morogoro. Renforcer la capacité de recherche sur les systèmes de production de bétail des départements de zootechnie, de production et d'économie agricole afin qu'ils puissent créer et tester des techniques d'alimentation du bétail. 209 800 \$ — 36 mois.

87-0024 Graines oléagineuses (Népal)
Department of Agriculture, Katmandou. Permettre à son Programme national de valorisation des graines oléagineuses d'augmenter et de stabiliser la production de ces graines au Népal grâce à un programme national de valorisation des graines oléagineuses. 413 700 \$ — 24 mois.

87-0025 Réseau de recherche sur les graines oléagineuses (Ethiopie) — Phase III
Institute of Agricultural Research, Addis-Ababa. Renforcer la recherche sur les graines oléagineuses faite en Asie du Sud et en Afrique de l'Est en créant un mécanisme de liaison pratique et efficace entre les programmes nationaux sur les graines oléagineuses. 391 200 \$ — 24 mois.

87-0026 Pejibate et aracées (Costa Rica)
Universidad de Costa Rica, San José. Permettre à son Centro de Investigaciones Agronómicas et la Ecole de biologie d'améliorer la productivité et la qualité de la pejibate par des méthodes génétiques et *in vitro* et de consolider un programme national de production de graines d'aracées sans virus, particulièrement de *Colocasia esculenta* et de l'espèce *Xanthosoma*. 336 900 \$ — 36 mois.

87-0027 Industrie de l'arachide (Philippines)
Isabela State University, Echague, National Food Authority, Quizon City. Etablir, pour une coopérative de cultivateurs d'arachides, un système post-production afin d'augmenter la production et les revenus de ses membres et de produire des arachides de meilleure qualité sans aflatoxine pour le marché. 234 300 \$ — 36 mois.

87-0032 Pisciculture (Côte d'Ivoire)
Ministère des Eaux et des Forêts, Abidjan. Permettre au Projet de vulgarisation de la pisciculture en milieu rural d'augmenter la production de poissons, en mettant à la disposition des agents d'encadrement et des pisciculteurs, des systèmes piscicoles bien définis et des techniques d'encadrement plus efficaces. 253 500 \$ — 30 mois.

87-0218 Méthode d'approche du développement des ressources humaines (Afrique du Centre et Maghreb)
Université de Yaoundé, Cameroun. Donner à une trentaine de spécialistes africains les capacités d'analyser les besoins de la région en matière de formation et de développement des ressources humaines d'une part et, d'autre part, définir un ensemble de projets capables de satisfaire ces besoins. 86 170 \$ — 6 mois.

87-0270 Éducation supérieure en Afrique orientale et australe
Division des bourses, CRDI. Promouvoir les études supérieures dans les universités de l'Afrique orientale et australe, en soulignant son importance comme source de chercheurs compétents et de ressources humaines de grand calibre. 500 000 \$ — 36 mois.

87-0324 Formation en édition au niveau national (Asie)
Sukhothai Thammathirat Open University, Nanthaburi. Former des rédacteurs et des éditeurs dans les régions du BRASI et du BRASU, en offrant aux établissements locaux le cours régional de formation en rédaction et édition du CRDI et de l'IRRI afin qu'ils puissent l'adapter à leurs besoins. 50 750 \$ — 18 mois.

87-0327 Programme de maîtrise : maladies des poissons et leur diagnostic (Malaisie)
Université Pertanian Malaisie, Serdang. Permettre à la Faculté des pêches et de l'océanographie de créer des programmes de maîtrise portant sur la théorie et les méthodes de recherche dans le domaine des maladies des poissons et leur diagnostic. 149 420 \$ — 48 mois.

87-0335 Formation à l'établissement de programmes d'étude (Philippines)
Southeast Asian Fisheries Development Center, Bangkok. Permettre au Département d'aquaculture des Philippines de financer un atelier de formation pour aider le personnel à appliquer de meilleures stratégies pédagogiques à la préparation et à l'enseignement des cours de courte durée. 32 000 \$ — 6 mois.

87-0336 Affectation de fonds du budget autorisée de la Division des bourses — Formation des ressources humaines au CDS-MICROIS (Global)
Division des bourses, CRDI. Former des techniciens travaillant à des projets financés par le CRDI en gestion du logiciel CDS-MICROIS et entraîner un groupe de techniciens comme personnes-ressources et instructeurs dans le cadre de futures activités de formation. 36 340 \$ — 18 mois.

87-0343 Atelier de formation à la recherche DAWN (Brésil)
Instituto Universitario de Pesquisas do Rio de Janeiro. Permettre au groupe Développement Alternatives with Women for a New Era de mettre sur pied un programme de recherche et de formation qui fera partie des études supérieures. 83 668 \$ — 18 mois.

87-1001 Jeune chercheurs canadiens
Permettre à la Division des bourses du CRDI, Ottawa, de contribuer au développement de la capacité des chercheurs canadiens intéressés par les grands problèmes du Tiers-Monde, en offrant des bourses à des Canadiens parvenus à différentes étapes de leur carrière universitaire et professionnelle pour qu'ils entreprennent des activités de recherche ou de formation dans un pays du Tiers-Monde. 550 000 \$ — 12 mois.

87-1002 Programme d'échange en médecine (Global) — Phase IV
Société canadienne pour la médecine tropicale et la santé internationale, Ottawa. Permettre à son personnel canadien de la santé de fournir des spécialistes auprès d'instants de pays en développement et ainsi augmenter les ressources humaines du domaine de la santé internationale au Canada et les activités parrainées par le Canada. 250 000 \$ — 12 mois.

87-1015 Institut de cours d'été sur le rôle des sexes et le développement
Université St. Mary's, Halifax, en collaboration avec l'Université Dalhousie, Halifax. Aider les étudiants à définir les sujets de recherche, à étudier les débats et les progrès méthodologiques et à analyser la littérature et les paradigmes courants sur le sujet « Les femmes et le développement » afin d'accroître leur capacité de conduire et superviser des recherches de haute qualité en sciences sociales sur les femmes ou les relations entre les sexes ou les deux. 60 000 \$ — 24 mois.

Sciences de l'agriculture, de l'alimentation et de la nutrition
86-0263 Utilisation des plantes-racines (Philippines)
Visayas State College of Agriculture, Pasay City. Elaborer et mettre à l'essai des techniques simples et peu coûteuses de transformation locale du manioc et de la patate douce. 166 000 \$ — 36 mois.

87-0001 Économie de la qualité des céréales sur les marchés nationaux (Asie)
Institut international de recherches sur le riz (IRRI), Philippines. Évaluer la qualité du riz sur les marchés intérieurs de huit pays asiatiques : Indonésie, Thaïlande, Birmanie, Malaisie, Pakistan, Inde, Bangladesh et Philippines. 88 500 \$ — 18 mois.

87-0007 Amélioration de la production du plantain (Colombie)
Instituto Colombiano Agropecuario, Bogotá. Augmenter et stabiliser la production du plantain dans les régions cibles de la Colombie en choisissant et en distribuant des cultivars supérieurs, en mettant au point et en transférant des méthodes culturales indiquées. 246 600 \$ — 36 mois.

87-0064 Cours de formation : lutte contre les insectes ravageurs (Afrique sub-saharienne) — Phase II
Centre international de physiologie et d'écologie des insectes, Kenya. Mettre sur pied un cours de formation afin de diffuser des connaissances pratiques dans le domaine de la gestion des insectes parasites et des vecteurs et favoriser les échanges à ce sujet. 67 920 \$ — 6 mois.

87-0065 Méthodes de recherche sur le rôle des sexes (Afrique sub-saharienne) — Phase II
Eastern and Southern African Management Institute, l' Tanzanie. Organiser un atelier de formation en vue de renforcer son programme de recherche sur le rôle des femmes dans le développement et les programmes des autres instituts de la région en fournissant des guides d'information qui intègrent le rôle des sexes. 69 900 \$ — 6 mois.

87-0066 Les microordinateurs et la recherche et l'analyse de données en santé (Kenya)
Kenya Medical Research Institute, Nairobi. Renforcer les capacités de son personnel. 80 456 \$ — 6 mois.

87-0067 Méthodes de recherche axées sur les problèmes urbains (Afrique sub-saharienne)
Institut ARDHI, l' Tanzanie. Offrir un cours de formation à l'intention de 25 participants dans le but d'élaborer des priorités communes de recherche au chapitre des études urbaines, améliorer les capacités de recherche des spécialistes en études urbaines et élaborer des propositions en matière de recherche pour en assurer le financement par les organismes donateurs, y compris le CRDI. 68 420 \$ — 6 mois.

87-0068 Cours sur les méthodes de recherche en foresterie (Afrique orientale) — Phase II
Université de Dar es-Salaam, l' Tanzanie. Permettre à la Faculté d'agriculture, de foresterie et de médecine vétérinaire d'offrir un cours de perfectionnement en recherche à l'intention des spécialistes de la région. 86 465 \$ — 6 mois.

87-0141 Science économique appliquée au réseau sur les plantes tropicales à tubercules (Amérique latine)
Universidad de Costa Rica. Permettre à l'Asociación Costarricense de Raíces Tropicales d'offrir aux agronomes et aux autres professionnels et techniciens des sciences biologiques des outils

87-0147 Renforcement de la réflexion et de l'enseignement sur le développement en Amérique latine
Corporación de Investigaciones para el Desarrollo, Chili. Elaborer un ensemble de dix trousseaux didactiques qui serviront de matériel d'enseignement dans des cours sur le développement économique. 84 430 \$ — 18 mois.

87-0156 Méthodes de classification des systèmes d'exploitation agricole (Amérique latine)
Universidad de San Carlos, Guatemala. Fournir aux chercheurs engagés dans l'application des techniques statistiques pour la classification des petites exploitations agricoles les outils analytiques nécessaires à la création de méthodes afin d'améliorer l'élaboration et la diffusion de systèmes de rechange à la portée des petits paysans. 42 000 \$ — 6 mois.

87-0163 Symposium sur l'enseignement supérieur (République dominicaine)
Asociación Dominicana de Rectores de Universidades, Saint-Domingue. Organiser un symposium sur l'enseignement supérieur dont se serviront les décideurs et administrateurs d'universités pour créer un mécanisme permanent d'analyse critique et de réflexion sur l'orientation de l'enseignement supérieur dans le pays. 59 876 \$ — 24 mois.

87-0164 Bourse de maître de recherche : M. José Joaquín Brunner (Amérique latine)
CRDI. Permettre à la Division des bourses d'offrir une bourse de recherche à M. José Joaquín Brunner qui étudiera la création, le maintien et l'expansion des collectivités scientifiques. 65 270 \$ — 12 mois.

87-0175 Services d'identification et de systématique des insectes pour les agriculteurs (Afrique sub-saharienne) — Phase II
Musées nationaux du Kenya. Offrir des cours de formation qui permettront à des entomologistes diplômés de recueillir, préparer et identifier des spécimens nuisibles aux cultures et de leurs prédateurs ; donner aux scientifiques les fondements de la systématique des insectes et de leur identification ; renforcer la capacité des musées nationaux du Kenya d'offrir des services de systématique à la région. 30 060 \$ — 6 mois.

87-0196 Fondation internationale pour la science (Global)
Fondation internationale pour la science, Suède. Financer une dizaine de jeunes chercheurs du Tiers-Monde afin qu'ils mènent des recherches dans un domaine jugé prioritaire par leur pays. 125 000 \$ — 12 mois.

Projets ayant fait l'objet d'affectation de fonds au cours de l'année budgétaire 1987-1988¹

Communications

87-0069 L'édition scientifique en Afrique du Nord

Institut agronomique et vétérinaire Hassan II, Maroc. Organiser deux stages de perfectionnement réunissant 20 responsables des revues scientifiques publiées en français en Afrique du Nord. 73 800 \$ — 9 mois.

87-0199 Edition savante (Afrique-Canada)*

Association canadienne des études africaines, Ottawa. Promouvoir l'édition savante en Afrique et encourager la collaboration en matière de recherche et d'édition entre le Canada et l'Afrique. 485 000 \$ — 36 mois.

87-0315 Labour léger — Utilisation (Kenya)*

Université de Nairobi, Kenya. Permettre à son Département des cultures (Kabete Campus) de transférer les connaissances actuelles aux vulgarisateurs du ministère de l'Agriculture et d'élaborer des stratégies de communications adaptées à la diffusion plus vaste de la technologie du labour léger aux paysans. 52 900 \$ — 30 mois.

87-0325 Soutien intégré au Centre de gestion de la recherche (Philippines)*

Université des Philippines à Los Baños, Laguna. Permettre au Centre de gestion de la recherche d'améliorer la capacité de réaction, la pertinence, la productivité et l'efficacité du système des sciences et de la technologie en favorisant le travail d'équipe, le soutien mutuel et la coopération chez les cadres, les chercheurs et le personnel de soutien en recherche. 73 500 \$ — 12 mois.

87-0329 Paulownia — Diffusion des résultats de la recherche (Chine-Amérique latine)*

Académie chinoise de foresterie, Beijing. Permettre à l'Institut de recherche en foresterie d'élaborer et d'appliquer un programme de communications à l'intention des paysans afin de les éduquer et de les informer sur les avantages de la culture intercalaire du paulownia et de partager les connaissances et l'expérience de la Chine avec les groupes-cibles de l'Amérique latine. 49 500 \$ — 30 mois.

L'astérisque indique que l'accord entre le CRDI et le bénéficiaire n'a peut-être pas été signé.

Division des bourses

87-0003 Cours régional de formation portant sur les réacteurs à biogaz avancés (Asie du Sud-Est)

Institut de technologie du roi Mongkut, Thaïlande. Développer sa capacité de recherche, de croissance et de conception afin d'utiliser un réacteur anaérobie à haut rendement en vue de traiter les déchets récupérant l'énergie. 78 202 \$ — 6 mois.

87-0029 Programme d'études de 3^e cycle : CIREs (Afrique de l'Ouest) — Phase III

Aider le Centre ivoirien de recherches économiques et sociales, Abidjan, en octroyant six bourses d'études au niveau du doctorat en économie rurale durant l'année universitaire 1987-1988. 124 400 \$ — 12 mois.

87-0056 Bourses — Académie de droit international de La Haye (Global)

Académie de droit international de La Haye, Pays-Bas. Former de jeunes avocats de pays en développement en droit international et offrir une aide aux programmes de formation de l'Académie offerts aux hommes de loi et chercheurs du domaine juridique venant de pays du Tiers-Monde. 25 733 \$ — 12 mois.

87-0062 Cours de formation : la reproduction chez les poissons (Brésil) — Phase II

Centro de Pesquisa e Treinamento em Aquicultura, São Paulo. Accroître la capacité de recherche locale en aquiculture en offrant une formation théorique et pratique sur la reproduction chez les poissons d'eau douce, la reproduction induite et l'élevage d'alevins dans le cadre de projets de recherche sur les pêches financées par le CRDI en Amérique latine et dans les Caraïbes. 61 875 \$ — 6 mois.

87-0345 Sondage de l'opinion publique canadienne

Decima Research de faire un sondage sur les idées, les attitudes, les intentions et le comportement des Canadiens au sujet du monde en développement. 99 400 \$ — 6 mois.

CENTRE DE RECHERCHES POUR LE DÉVELOPPEMENT INTERNATIONAL

DÉPENSES D'ADMINISTRATION
pour l'exercice terminé le 31 mars 1988

1987	1988
	Traitements et prestations
\$6,065,602	\$ 6,523,077
1,004,136	1,460,730
638,654	643,705
488,402	513,214
238,885	363,618
535,439	323,311
185,141	270,587
164,208	174,484
-	62,258
33,288	28,004
\$9,353,755	\$10,362,988
	Assurances
	Dépenses de groupes de travail
	Télécommunications
	Services professionnels et spéciaux
	Amortissement
	Réunions des gouverneurs
	Déplacements et déménagements
	Dépenses de bureau et divers
	Locaux

DÉPENSES DE RECHERCHE ET DE SOUTIEN
pour l'exercice terminé le 31 mars 1988

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autres pays. En vertu de ces contrats de location, les engagements annuels du Centre sont les suivants:

Exercice se terminant le 31 mars

1989	\$ 5,071,598
1990	3,691,120
1991	3,608,161
1992	3,659,203
1993-1997	19,721,343
<hr/>	
\$35,751,425	

9. Engagements contractuels - Subventions et élaboration de projets

Le Centre s'est engagé à verser des subventions totalisant \$96,000,000 au cours des quatre prochains exercices, à condition que le Parlement du Canada mette les fonds nécessaires à sa disposition et à condition que les bénéficiaires se conforment aux modalités de subvention des projets. Le Centre a également offert de façon officielle des subventions à des bénéficiaires susceptibles de les recevoir, pour un montant total de \$26,100,000; il attend l'acceptation de ces offres.

10. Éventualités

Le Centre est le défendeur dans deux poursuites concernant des dommages et des frais que les demandeurs prétendent avoir subis. La direction et le conseil juridique sont d'avis que les demandeurs n'ont aucun recours contre le Centre. Par conséquent, aucune provision n'a été comptabilisée dans les états financiers. Les résultats de ces poursuites n'auraient aucun effet important sur les opérations du Centre.

11. Chiffres comparatifs

Certains chiffres de l'exercice précédent ont été redressés afin de les rendre conformes à la présentation de l'exercice courant.

Le Centre a conclu différents contrats de location pour des bureaux, du matériel et du logement pour le personnel tant au Canada que dans plusieurs

8. Contrats de location-exploitation

Les fonds pour les contrats de recherche inclus dans le passif au montant de \$685,697 (1987, \$915,689) comprennent \$332,537 détenus pour l'ACDI (1987, \$661,459).

Les dépenses de contrats de recherche de \$2,107,575 (1987, \$1,422,803) comprennent \$1,436,190 reçu de l'ACDI (1987, \$1,198,162). De plus, le Centre a reçu \$56,489 de frais d'administration de l'ACDI (1987, \$51,334); ces frais sont inclus dans les intérêts sur placements et autres revenus.

Ces contrats de recherche, gérés par le Centre, sont financés par d'autres organisations internationales, l'Agence canadienne de développement international (ACDI) et d'autres agences gouvernementales fédérales.

7. Contrats de recherche

Frais courus - projets	
Prestations courues de congés annuels et autres congés accumulés	
Autres	
1988	1987
\$9,421,661	\$7,974,540
1,313,885	1,235,921
2,403,288	2,539,984
\$5,704,488	\$4,198,635

6. Créditeurs et frais courus

Solde au début de l'exercice	
Dons reçus	
Intérêts créditeurs	
Dépenses	
Solde à la fin de l'exercice	
John Bene	
Gouverneur	
Total des fondations	
1988	1987
\$ 138,465	\$ 131,059
5,150	7,406
12,658	—
(5,000)	—
\$ 151,273	\$ 138,465
\$ 146,160	\$ 138,465
5,113	—
\$ 151,273	\$ 138,465

En 1987, la succession du regretté John Bene a créé une fondation qui doit être administrée par le CRDI et être consacrée à l'octroi de bourses d'études supérieures en foresterie sociale. Au cours de l'exercice courant, un ancien Gouverneur du Centre a établi une fondation pour la recherche appliquée ou reliée aux missions.

5. Fondations

1. Statut et objectif

Le Centre de recherches pour le développement international est une société sans capital-actions, créée en 1970 par une loi du Parlement du Canada appelée la Loi sur le Centre de recherches pour le développement international. Le Centre a reçu une subvention annuelle du Parlement du Canada en conformité avec les Crédits 50 et 60 du ministère des Affaires extérieures, ceci pour les exercices terminés le 31 mars 1988 et le 31 mars 1987 respectivement.

Le Centre a pour objectif d'entreprendre, d'encourager, de soutenir et de poursuivre des recherches sur les problèmes des régions du monde en développement et sur les moyens d'application et d'adaptation des connaissances scientifiques, techniques et autres au progrès économique et social de ces régions.

2. Principales conventions comptables

Les états financiers ont été préparés conformément aux principes comptables généralement reconnus au Canada et traduisent les conventions suivantes:

Immobilisations
Les immobilisations sont comptabilisées au prix coûtant et sont amorties sur la durée estimative d'utilisation des biens. Les améliorations locatives sont amorties selon la durée des contrats de location respectifs. Les méthodes comptables et les taux annuels prévus pour l'amortissement des immobilisations sont les suivants:

Méthode		Taux (%)
Matériel informatique	Linéaire	20
Améliorations locatives	Linéaire	5-100
Mobilier et matériel de bureau	Solde dégressif	20
Véhicules	Solde dégressif	30
Système téléphonique	Linéaire	20

Dépenses
Les dépenses sont inscrites selon la méthode de la comptabilité d'exercice sauf pour les dépenses de contrats de recherche qui sont comptabilisées lorsqu'elles sont versées.

Comptabilisation des revenus

La subvention du Gouvernement est comptabilisée quand elle est reçue. Les intérêts sur les placements et les fondations sont comptabilisés dans la période encourue.

Les revenus tirés des contrats de recherche et de la contribution de l'Agence canadienne du développement international (ACDI) sont comptabilisés lorsque les dépenses afférentes sont engagées. L'excédent des revenus sur les dépenses des contrats de recherche et de la contribution de l'ACDI est inclus dans le passif à court terme.

Indemnités de cessation d'emploi courues

Les employés bénéficient de certaines indemnités de cessation d'emploi calculées selon le salaire au moment de la cessation et selon les conditions d'emploi. Le passif résultant de ces indemnités est comptabilisé au fur et à mesure que les montants s'accumulent au crédit de l'employé.

ETAT DE L'ÉVOLUTION DE LA SITUATION FINANCIÈRE
pour l'exercice terminé le 31 mars 1988

	1988	1987
ACTIVITÉS D'EXPLOITATION		
Encaisse provenant de (absorbé par) l'exploitation	\$ 6,016,240	\$ 1,432,159
Excédent des revenus sur les dépenses		
Éléments ne comportant aucun mouvement de fonds		
Amortissement	944,724	1,095,018
Provision pour indemnités de cessation d'emploi	356,694	357,568
Perte (gain) lors de l'aliénation	(79,157)	11,502
d'immobilisations		
7,238,501		2,896,247
Débiteurs	(183,314)	(94,684)
Frais payés d'avance	(272,901)	44,858
Dépôts recouvrables	247,033	11,155
Créditeurs et frais courus	1,447,121	(471,981)
Paiement d'indemnités de cessation d'emploi	(292,215)	(316,600)
Contrats de recherches	(229,992)	224,552
Loyer différé	2,651,480	270,229
10,605,713		2,563,776
ACTIVITÉS DE FINANCEMENT		
Dû au Gouvernement du Canada	—	(4,000,000)
ACTIVITÉS D'INVESTISSEMENT		
Acquisition d'immobilisations	(1,088,862)	(1,354,825)
Produit de l'aliénation d'immobilisations	105,933	46,763
(982,929)		(1,308,062)
AUGMENTATION (DIMINUTION) DES FOND	9,622,784	(2,744,286)
ENCAISSE ET DÉPÔTS À COURT TERME	9,181,248	11,925,534
AU DÉBUT DE L'EXERCICE		
ENCAISSE ET DÉPÔTS À COURT TERME	\$18,804,032	\$ 9,181,248
À LA FIN DE L'EXERCICE		

CENTRE DE RECHERCHES POUR LE DÉVELOPPEMENT INTERNATIONAL
 ÉTAT DE L'AVOIR DU CANADA
 pour l'exercice terminé le 31 mars 1988

	1988	1987
SOLDE AU DÉBUT DE L'EXERCICE	\$ 2,554,926	\$ 1,122,767
Excédent des revenus sur les dépenses	6,016,240	1,432,159
SOLDE À LA FIN DE L'EXERCICE	\$ 8,571,166	\$ 2,554,926

ÉTAT DES RÉSULTATS

pour l'exercice terminé le 31 mars 1988

1988

1987

DÉPENSES

Recherche en développement

\$ 53,953,596	\$ 51,999,681
6,301,802	6,959,083
2,107,575	1,422,803
62,362,973	60,381,567

Subventions de projets
Projets du Centre
Contrats de recherche (note 7)

Activités reliées à la recherche

4,909,033	4,893,498
2,428,098	2,131,104
1,482,233	1,396,237
8,819,364	8,420,839

Élaboration et financement de projets
Diffusion de l'information
Bibliothèque spécialisée en recherche
en développement

Soutien à la recherche opérationnelle

13,612,515	12,876,019
5,827,616	5,394,586
5,415,467	4,541,789
24,855,598	22,812,394

Assistance technique
Bureaux régionaux
Gestion des divisions

Total des dépenses de recherche

96,037,935	91,614,800
10,362,988	9,353,755
106,400,923	100,968,555

Dépenses d'administration (annexe 2)
et de soutien (annexe 1)

REVENUS

Subvention du Parlement du Canada
Intérêts sur placements et autres revenus
Contrats de recherche (note 7)

108,100,000	100,000,000
2,209,588	977,911
2,107,575	1,422,803
112,417,163	102,400,714

EXCÉDENT DES REVENUS SUR LES DÉPENSES

\$ 6,016,240	\$ 1,432,159
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CENTRE DE RECHERCHES POUR LE DÉVELOPPEMENT INTERNATIONAL

BILAN

au 31 mars 1988

	1988	1987
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ACTIF

A court terme

Encaissé et dépôts à court terme (note 3)

\$18,804,032

\$ 9,181,248

Frais payés d'avance

739,013

555,699

Dépôts recouvrables
Immobilisations (note 4)
Fondations (note 5)

20,516,611

10,437,612

\$24,293,225

\$14,331,089

PASSIF

A court terme

Créditeurs et frais courus (note 6)

\$ 9,421,661

\$ 7,974,540

Fonds pour les contrats de recherche (note 7)

685,697

915,689

Indemnités de cessation d'emploi courues
Loyer différé - Siège social
Fondations (note 5)

10,107,358

8,890,229

8,571,166

2,554,926

\$24,293,225

\$14,331,089

Approuvé:

Le Président

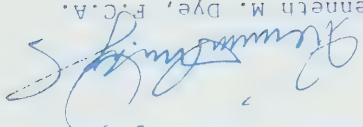
Le Trésorier

John J. Good

William

Ottawa, Canada
16 juin 1988

Kenneth M. Dye, F.C.A.



Le Vérificateur général du Canada

J'ai vérifié le bilan du Centre de recherches pour le développement international au 31 mars 1988 ainsi que les états des résultats, de l'avoir du Canada et de l'évolution de la situation financière pour l'exercice terminé à cette date. Ma vérification a été effectuée conformément aux normes de vérification généralement reconnues au Canada, en accord avec les Normes de vérification internationales, et a comporté par conséquent les sondages et autres procédés que j'ai jugés nécessaires dans les circonstances.

A mon avis, ces états financiers présentent fidèlement la situation financière du Centre au 31 mars 1988 ainsi que les résultats de son exploitation et l'évolution de sa situation financière pour l'exercice terminé à cette date selon les principes comptables généralement reconnus, appliqués de la même manière qu'au cours de l'exercice précédent.

Le Centre de recherches pour le développement international
et
Le Secrétaire d'Etat aux Affaires extérieures

RAPPORT DU VÉRIFICATEUR

VÉRIFICATEUR GÉNÉRAL DU CANADA

AUDITOR GENERAL OF CANADA



NIVEAUX DES ANNÉES-PERSONNES ET AFFECTATIONS

	1988-1989		1987-1988		1986-1987	
	Budget		Budget	Réalisations	Budget	Réalisations
Divisions de programme	300,00		297,50	285,50	300,50	280,75
Sciences de l'agriculture, de l'alimentation et de la nutrition	50,00		50,50	50,00	52,00	50,75
Sciences de la santé	36,00		35,00	35,00	35,00	30,75
Sciences sociales	48,50		48,00	45,75	49,50	47,00
Personnel rattaché aux projets	41,50		39,50	37,75	40,00	36,00
Sciences de la terre et du génie	37,50		39,50	36,75	39,00	36,75
Bourses	19,00		18,00	15,50	18,00	17,50
Communications	12,00		12,00	11,75	12,00	11,25
Personnel rattaché aux projets	25,50		26,00	22,25	25,00	23,50
Bureau de planification et d'évaluation	19,00		18,00	19,75	19,00	17,00
	11,00		11,00	11,00	11,00	10,25
Administration générale	161,50		163,50	161,25	162,75	159,00
Bureau de direction	18,00		19,00	19,00	19,00	19,75
Bureau du Secrétaire et Conseiller juridique	15,00		15,00	16,25	18,75	17,50
Bureau du Trésorier	39,00		97,00	92,00	93,50	92,00
Administration*	37,00		—	—	—	—
Traitement électronique des données*	14,00		—	—	—	—
Bureau des ressources humaines	19,50		19,50	21,50	18,50	17,00
Administration des bureaux régionaux	14,00		8,00	8,00	8,00	8,00
Vérification interne	5,00		5,00	4,50	5,00	4,75
Détachements, congés d'études ou sabbatiques	5,00		3,00	3,00	3,50	3,50
Total	466,50		464,00	449,75	466,75	443,25

* Figurant les années précédentes sous le titre "Bureau du Trésorier".

TOTAUX POUR LE CRDI

FAITS SAILLANTS FINANCIERS (000 \$)

	Réalisations 1984-1985	Réalisations 1985-1986	Réalisations 1986-1987	Réalisations 1987-1988	Budget 1988-1989
RÉSULTATS DES OPÉRATIONS					
Revenus	\$ 84 659	\$ 89 663	\$ 102 401	\$ 112 417	\$ 119 500
Subvention du Parlement du Canada	81 000	86 000	100 000	108 100	114 200
Placements et autres revenus	3 164	1 881	978	2 210	2 100
Contrats de recherche	495	1 782	1 423	2 107	3 200
Dépenses	\$ 85 003	\$ 91 486	\$ 100 969	\$ 106 401	\$ 121 100
Recherche pour le développement*	49 840	54 585	60 382	62 362	73 240
Activités reliées à la recherche	7 731	7 003	8 421	8 820	9 300
Aide opérationnelle à la recherche	19 129	21 183	22 812	24 856	28 690
Administration générale	8 303	8 715	9 354	10 363	9 870
Excédent des revenus sur les dépenses (des dépenses sur les revenus) (344)	\$ (1 344)	\$ (1 823)	\$ 1 432	\$ 6 016	\$ (1 600)
ACTIVITÉS DE PROGRAMME					
Affectations	\$ 102 778	\$ 102 199	\$ 111 517	\$ 124 904	\$ 142 590
Nouveaux projets	75 346	72 301	79 351	89 685	104 030
Bureaux régionaux	4 456	4 947	5 394	5 828	7 450
Services techniques	10 676	12 012	12 876	13 613	15 180
Administration des divisions	3 997	4 224	4 542	5 415	6 060
Administration générale	8 303	8 715	9 354	10 363	9 870
Engagements	\$ 105 495	\$ 95 383	\$ 105 099	\$ 120 154	\$ 133 420
Projets	78 063	65 485	72 933	84 935	94 860
Bureaux régionaux	4 456	4 947	5 394	5 828	7 450
Services techniques	10 676	12 012	12 876	13 613	15 180
Administration des divisions	3 997	4 224	4 542	5 415	6 060
Administration générale	8 303	8 715	9 354	10 363	9 870
Engagements en cours	\$ 82 317	\$ 88 900	\$ 88 343	\$ 96 000	\$ 109 600

* Incluant les contrats de recherche.

TOTAUX POUR LE CRDI
FAITS SAILLANTS FINANCIERS (000 \$)

Écart en pourcen- Réali- tations 1987-1988	Budget 1987-1988	Réali- sations 1987-1988	Budget 1986-1987	Réali- sations 1986-1987	(% de va- riation)
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OPÉRATIONS FINANCIÈRES

Revenus	\$108 800	\$112 417	3,3	\$102 401	9,8
Subvention du Parlement du Canada	108 100	108 100	0,0	100 000	8,1
Placements et autres revenus	700	2 210	215,7	978	126,0
Contrats de recherche	—	2 107	—	1 423	48,1
Dépenses	\$106 649	\$106 401	0,2	\$100 969	5,4
Projets en cours	48 617	47 630	2,0	48 039	(0,9)
Nouveaux projets*	21 971	23 552	(7,2)	20 764	13,4
Bureaux régionaux	6 139	5 828	5,1	5 394	8,0
Soutien technique	13 785	13 613	1,2	12 876	5,7
Administration des divisions	5 397	5 415	(0,3)	4 542	19,2
Administration générale	10 740	10 363	3,5	9 354	10,8
Excédent des revenus sur les dépenses (des dépenses sur les revenus)	\$ 2 151	\$ 6 016	(179,7)	\$ 1 432	(320,1)

ACTIVITÉS DE PROGRAMME

Affectations	\$125 767	\$124 904	0,7	\$111 517	12,0
Nouveaux projets	89 706	89 685	0,0	79 351	13,0
Bureaux régionaux	6 139	5 828	5,1	5 394	8,0
Soutien technique	13 785	13 613	1,2	12 876	5,7
Administration des divisions	5 397	5 415	(0,3)	4 542	19,2
Administration générale	10 740	10 363	3,5	9 354	10,8
Engagements	\$117 961	\$120 154	(1,9)	\$105 098	14,3

Projets	81 900	84 935	(3,7)	72 932	16,5
Bureaux régionaux	6 139	5 828	5,1	5 394	8,0
Services techniques	13 785	13 613	1,2	12 876	5,7
Administration des divisions	5 397	5 415	(0,3)	4 542	19,2
Administration générale	10 740	10 363	3,5	9 354	10,8

* Incluant les contrats de recherche.

Affectations du CRDI

Les affectations totales du CRDI pour 1987-1988 ont été de 124,9 millions de dollars par rapport à 111,5 millions de dollars en 1986-1987, soit une augmentation de 12,0 %. Cette somme comprend 89,7 millions de dollars affectés aux nouveaux projets, soit 71,8 % des affectations totales de l'exercice. La figure 3 illustre les affectations selon la région géographique.

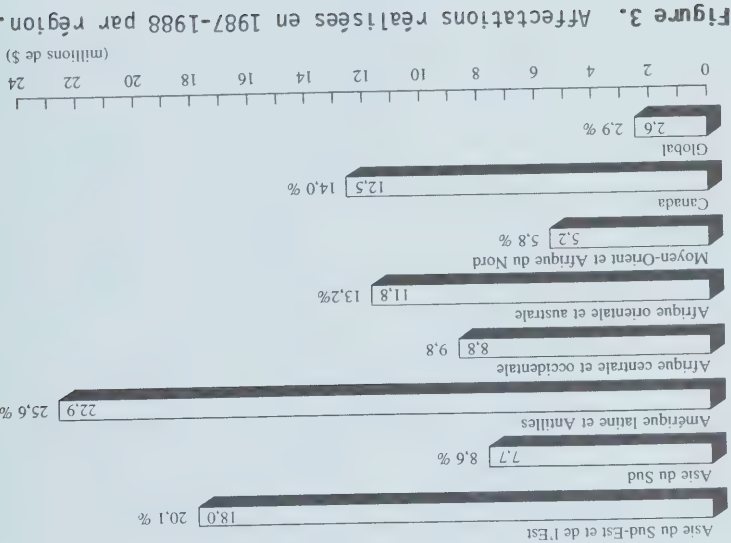
En 1988-1989, les affectations totales devraient atteindre 142,6 millions de dollars, dont 104,0 millions, ou 72,9 % du total, seront réservés au programme.

Responsabilité pour les états financiers

Les états financiers ont été préparés par la direction conformément aux principes comptables généralement reconnus qui conviennent dans les circonstances. La direction assume également la responsabilité pour toutes les autres informations contenues dans le Rapport annuel, qui concordent, s'il y a lieu, avec celles contenues dans les états financiers. Pour bien s'acquiescer de cette responsabilité, la direction s'appuie sur des méthodes et des systèmes de contrôle financiers et gestionnels qui garantissent, de manière raisonnable, la fiabilité des informations financières, la protection des biens et l'efficacité d'exécution des activités. Le CRDI a un service de vérification interne dont les fonctions normales comprennent la révision périodique des contrôles financiers internes et leur application.

Le Conseil des gouverneurs est chargé de s'assurer que la direction assume ses responsabilités en matière de communication de l'information financière et de contrôle interne. Il le fait par l'entremise du Comité des finances et de la vérification, dont les membres ne sont pas des employés du CRDI. Le Comité rencontre régulièrement la direction, les vérificateurs internes et les vérificateurs externes.

Le Vérificateur général du Canada fait un examen indépendant des états financiers conformément aux normes de vérification généralement reconnues et donne son opinion sur ces états. Son examen comprend une étude et une évaluation du système de contrôle du CRDI et la conduite de sondages et l'application de méthodes qui l'autorisent à faire état de la justesse de la présentation des états financiers. Le Comité des finances et de la vérification du Conseil est à l'entière disposition des vérificateurs externes.



à l'exercice précédent. Il faut noter cependant que 8,6 % de cette augmentation résulte d'une réclassification de certains coûts entrant dans la catégorie "administration générale", qu'on a décidé d'attribuer désormais aux bureaux régionaux. Par conséquent, la part des dépenses totales du CRDI que représente cette catégorie passera de 5,5 % en 1987-1988 à 6,1 % en 1988-1989.

Administration des divisions

Les dépenses d'administration des divisions se sont élevées à 5,4 millions de dollars en 1987-1988, soit une augmentation de 19,2 % par rapport à 1986-1987, et ont représenté 5,1 % des dépenses totales du CRDI en 1987-1988. Cette hausse est attribuable principalement aux coûts plus élevés de location des locaux du siège.

Il est prévu que les dépenses d'administration des divisions augmenteront de 11,9 % en 1988-1989, atteignant environ 6,1 millions de dollars. La part des dépenses totales du CRDI que représente cette catégorie diminuera légèrement, passant de 5,1 % en 1987-1988 à 5,0 % en 1988-1989.

Administration générale

L'ensemble des activités du CRDI nécessite une politique, une direction, une administration et des services. Ces fonctions sont assumées par le Conseil des gouverneurs ainsi que par le bureau de direction, le Secrétaire et Conseil-ler juridique, le Trésorier et le Bureau des ressources humaines et, enfin, par les services d'administration, de traitement électronique des données et de vérification interne.

Les dépenses d'administration générale se sont élevées à 10,4 millions de dollars en 1987-1988, soit une augmentation de 10,8 % par rapport à l'exercice précédent. L'augmentation est principalement attribuable aux coûts plus élevés de location des locaux du siège. La part des dépenses totales du CRDI que représente cette catégorie a légèrement augmenté, passant de 9,3 % en 1986-1987 à 9,8 % en 1987-1988.

Il est prévu que les coûts d'administration passeront à 9,9 millions de dollars en 1988-1989, soit une diminution de 4,8 % par rapport à 1987-1988. Comme nous l'avons expliquée à la section sur les bureaux régionaux, le coût de certaines activités, s'élevant à 0,5 million de dollars, est désormais attribué aux bureaux régionaux plutôt qu'à l'administration générale. En excluant les effets de cette nouvelle répartition, le budget de l'administration générale pour 1988-1989 demeure au même niveau qu'en 1987-1988, soit 10,4 millions de dollars.

Avoir du Canada

L'avoir du Canada, au 31 mars 1988, a augmenté à 8,6 millions de dollars par rapport à 2,6 millions pour l'exercice précédent. Cette forte hausse est attribuable à des revenus plus élevés que prévu et à la proportion moins élevée des dépenses du programme, comme nous l'avons déjà expliqué. On prévoit qu'en 1988-1989, l'avoir du Canada en fin d'exercice se rétablira à un niveau beaucoup moins élevé.

Années-personnes

En 1987-1988, les années-personnes du CRDI ont totalisé 449,75 par rapport aux 464 prévues. Les vacances furent concentrées dans le secteur des services techniques et s'expliquent par le retard mis à combler les postes vacants. En 1988-1989, on prévoit que le nombre des années-personnes au siège se main-

tiendra au niveau prévu de 467.

Il est prévu que les dépenses pour les bureaux régionaux atteindront, en 1988-1989, 7,5 millions de dollars, soit une augmentation de 27,8 % par rapport

à 1987-1988. Les six bureaux régionaux jouent un rôle important car ils aident le CRDI à maintenir de meilleurs contacts avec les bénéficiaires des subventions et à mieux répondre aux besoins du Tiers-Monde. Ces bureaux sont situés en Colombie, en Égypte, en Inde, au Kenya, au Sénégal et à Singapour. Le coût total de fonctionnement de ces bureaux en 1987-1988 a été de 5,8 millions de dollars, soit une augmentation de 8,0 % par rapport à 1986-1987. Cette catégorie de dépenses représente 5,5 % des dépenses totales du CRDI pour 1987-1988.

Bureaux régionaux

Pour 1988-1989, on prévoit des dépenses de 15,2 millions de dollars pour les services techniques, soit une augmentation de 11,5 %, mais la part de cette catégorie par rapport aux dépenses totales baissera à 12,6 %.

Cette catégorie de dépenses comprend le coût du personnel des programmes dont le rôle est d'élaborer de nouveaux projets, de suivre les projets de recherche en cours et de fournir une assistance technique aux bénéficiaires. En 1987-1988, les dépenses pour les services techniques ont été de 13,6 millions de dollars ou 12,8 % des dépenses totales du CRDI, soit la même proportion qu'en 1986-1987.

Services techniques

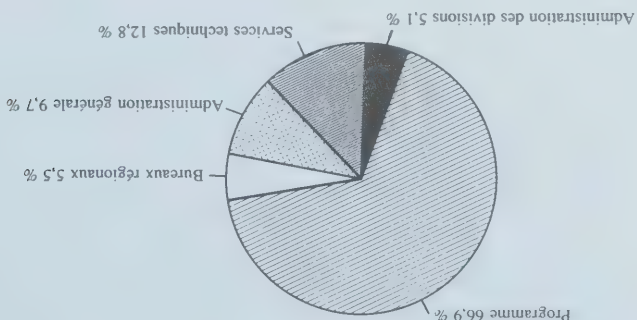
En 1987-1988, les dépenses pour les activités liées à la recherche se sont élevées à 8,8 millions ou 8,3 % des dépenses totales du CRDI.

Les activités reliées à la recherche comprennent de petits projets qui permettent d'élaborer des projets de recherche et d'aider à la diffusion ou à l'application efficace de résultats de recherche. Ces activités permettent également de maintenir une bibliothèque spécialisée en recherche pour le développement, qui dessert la communauté canadienne du développement et le personnel du CRDI, et de mettre sur pied des activités restreintes de soutien aux programmes du CRDI.

Activités reliées à la recherche

Les dépenses pour les projets en cours, qui dans la majorité des cas sont des dépenses de recherche pour le développement, ont été légèrement inférieures, de 0,9 %, à celles de l'exercice précédent. Cependant, les dépenses pour de nouveaux projets ont augmenté de 13,4 % par rapport à 1987-1988.

Figure 2. Ventilation des dépenses réalisées en 1987-1988.



de dollars en 1987-1988, ce qui comprend une somme de 1,4 million versée par l'Agence canadienne de développement international (ACDI) pour des travaux de recherche exécutés ou administrés par le CRDI en son nom.

Pour 1988-1989, on prévoit un revenu total de 119,5 millions de dollars, soit un accroissement de 6,3 % par rapport à 1987-1988.

Dépenses

En 1987-1988, les dépenses totales du CRDI se sont chiffrées à 106,4 millions de dollars, soit une augmentation de 5,4 millions de dollars ou 5,4 % par rapport à l'exercice précédent. La figure 2 illustre le pourcentage de chaque catégorie de dépenses en 1987-1988.

Le tableau suivant compare les dépenses prévues (budget) pour 1988-1989 et les dépenses réelles (réalisations) en 1987-1988 et au cours des trois années précédentes.

DÉPENSES (en millions de dollars)

Budget				Réalizations			
1988- % du	1989 total	1987- % du	1988 total	1986- % du	1987 total	1985- % du	1986 total

Recherche pour le développement	\$ 73,2	60,4	\$ 62,4	58,6	\$ 60,4	59,8	\$54,6
Activités reliées à la recherche	9,3	7,7	8,8	8,3	8,4	8,3	7,0
Services techniques	15,2	12,6	13,6	12,8	12,9	12,8	12,0
Bureaux régionaux	7,4	6,1	5,8	5,5	5,4	5,3	5,0
Administration des divisions	6,1	5,0	5,4	5,1	4,5	4,5	4,2
Administration générale	9,9	8,2	10,4	9,8	9,4	9,3	8,7
Total	\$121,1	100,0	\$106,4	100,0	\$101,0	100,0	\$91,5
	100,0				100,0		100,0
	\$85,0						\$85,0
	100,0						100,0

Recherche pour le développement

La recherche pour le développement reflète les coûts directs de tous les projets de recherche scientifique et technique financés par le CRDI dans les pays en développement. Elle est la raison d'être du CRDI. Cette catégorie comprend le financement des projets du CRDI et des réseaux internationaux de recherche; les projets identifiés, élaborés et administrés par des chercheurs des pays en développement et les projets de recherche à contrat administrés au nom d'autres agences subventionnaires.

En 1987-1988, les dépenses reliées aux activités de recherche pour le développement se sont élevées à 62,4 millions de dollars ou 58,6 % des dépenses

EXPOSÉ FINANCIER ET FAITS SAILLANTS

Pour la deuxième année consécutive, la subvention du CRDI a été réduite sous le niveau prévu, pour être par la suite augmentée en cours d'exercice. La réduction de 2,2 millions de dollars a donc été récupérée à la mi-décembre 1987. La subvention totale s'est donc chiffrée à 108,1 millions de dollars, soit 4 % de l'engagement global au titre de l'Aide publique au développement (APD). En 1987-1988, le CRDI a continué à participer au programme de restrictions du gouvernement du Canada. Il a atteint ces objectifs en maintenant un blocage des effectifs au siège social et en mettant en oeuvre une série de recommandations ayant pour objectif d'accroître l'efficacité et l'efficience de son exploitation.

Revenu

Le revenu total du CRDI a été de 112,4 millions de dollars, soit une augmentation de 9,8 % par rapport à l'exercice précédent. Les revenus comprennent la subvention du Parlement de 108,1 millions de dollars, des revenus de 2,2 millions de dollars provenant de placements et d'autres sources ainsi que des revenus de contrats de recherche de 2,1 millions de dollars. La figure 1 illustre la tendance au cours des cinq dernières années.

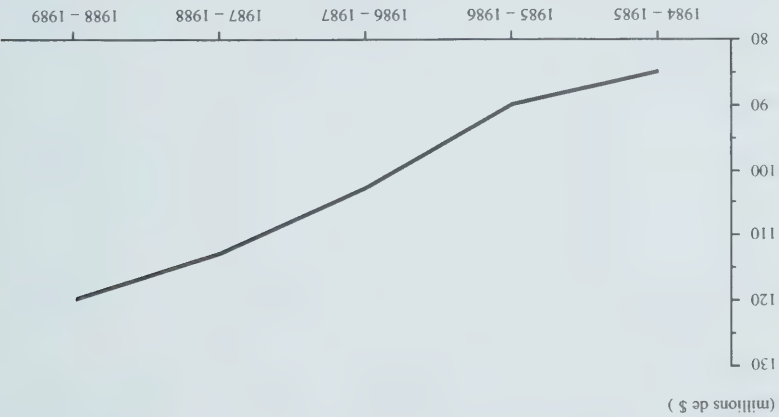


Figure 1. Revenus du CRDI de 1984-1985 à 1988-1989 (selon le budget).

La subvention du Parlement pour 1987-1988, d'un montant de 108,1 millions de dollars, représente une augmentation de 8,1 millions de dollars, ou 8,1 %, par rapport à l'exercice précédent. La somme de 2,2 millions de dollars provenant de placements et d'autres sources de revenu en 1987-1988 a été supérieure à l'objectif budgétaire prévu de 0,7 million de dollars. Le revenu de placements a été de 1,5 million de dollars, le budget prévoyant 0,5 million de dollars. Cet écart positif est attribuable au rendement plus élevé que prévu du portefeuille des investissements durant l'année. Au titre des autres sources de revenu, on a également dépassé les prévisions de 0,2 million de dollars pour atteindre 0,7 million, ce qui comprend les droits de licence de MINISIS de 0,3 million de dollars et 0,4 million au titre des autres sources de revenu. Enfin, les travaux de recherche à contrat ont généré des revenus de 2,1 millions

Cadres supérieurs

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Afrique centrale et occidentale (Dakar)
(Démission le 31 décembre 1987)

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occidentale, un certain nombre d'activités ont été subventionnées dans les domaines de première importance, notamment le rôle des langues locales et l'exécution de réformes en éducation.

En Asie du Sud, du Sud-Est et de l'Est, les questions d'équité sociale, de qualité de l'éducation et de participation ont continué de retenir l'attention. Le programme s'est attaché à la mise en réseau d'activités par l'entremise du groupe régional consultatif et de recherche en éducation comme moyen pour consolider les liens entre les chercheurs. En Thaïlande et en Inde, et dans le deuxième cas en collaboration avec l'Université de l'Alberta, des activités spéciales reliées à l'étude des méthodologies de recherche qualitative ont été entreprises.

Au nombre des activités générales financées par le programme il y a eu les ateliers de chercheurs, de praticiens de l'enseignement et d'enseignants africains, asiatiques et latino-américains; la publication d'études de grand calibre sur les problèmes les plus importants pour les chercheurs des pays en développement et la mise sur pied d'activités communes avec d'autres agences internationales, dont la Banque mondiale et le Groupe consultatif sur les soins et le développement de la prime enfance.

Femmes et développement

L'an dernier, la Division des sciences sociales a créé un nouveau groupe, destiné à offrir des services à l'échelle de tout le CRDI, la section «Femmes et développement». La section a pour mandat de venir en aide à la recherche sur l'intégration des femmes au développement et d'être un centre de ressources pour les travaux sur le rôle des sexes et les travaux connexes.

Au cours de sa première année, la section «Femmes et développement» a financé seize projets, de façon autonome ou en collaboration avec la Division de l'agriculture, de l'alimentation et de la nutrition, la Division des bourses, la Division des sciences de la santé et la Division des sciences sociales. Elle a également mis en place le Programme des stagiaires, qui a permis à des chercheurs d'être rattachés à une division du CRDI pour six mois ou moins, afin de travailler simultanément à leurs recherches et aux questions qui intéressent la section «Femmes et développement». En collaboration avec la Division des bourses, la section a également financé l'Institut d'été sur le rôle des sexes et le développement à l'Université Dalhousie, Canada, et le colloque «Les femmes et la gestion des ressources naturelles en Afrique», à l'Université York, Canada.

Le développement urbain et régional

En 1987-1988, le programme du développement urbain et régional a continué de financer la recherche sur la politique du logement et des services, des entreprises du secteur parallèle et de la gestion urbaine. Les projets subventionnés comprennent deux grands réseaux internationaux en Amérique latine sur le logement local et sur les réformes municipales et les administrations locales. En Asie le programme a subventionné la seconde phase d'un réseau de projets de recherche sur les zones de traitement des exportations et un projet sur les aliments vendus par des marchands ambulants en Inde. En Afrique, les subventions sont allées notamment à un projet sur les politiques d'aide au secteur parallèle au Kenya.

Trois importants ateliers internationaux ont été tenus, le premier sur les administrations locales en Amérique latine, le second sur l'impact des programmes de développement régional sur les groupes défavorisés en Asie et le troisième sur l'emploi à l'extérieur des fermes en Asie.

La politique économique

Le programme de politique économique continue de lier les chercheurs travaillant sur des sujets semblables grâce à des réseaux locaux. En 1987-1988, le développement de certains de ces réseaux a été poussé plus loin. Les chercheurs en Asie du Sud-Est ont élargi le travail déjà fait par les chercheurs étudiant le problème de la dette en Amérique latine ont élargi leur champ d'étude à l'Afrique et aux Antilles. Le programme a aussi invité d'autres donateurs à se joindre à lui pour subventionner la recherche et la formation en macroéconomie en Afrique anglophone par la formation d'un consortium pour la recherche économique. Enfin, le programme a collaboré avec la Division des bourses du CRDI pour ajouter une composante formation à son réseau macroéconomique latino-américain afin de s'assurer que les jeunes universitaires continuent d'apporter leurs perspectives nouvelles à la communauté des chercheurs de la région en se joignant à elle.

L'éducation

En 1987-1988 le programme de l'éducation a poursuivi ses efforts d'implantation et de consolidation de stratégies conçues pour les diverses régions du monde en développement. Le programme a financé des travaux de recherche sur l'éducation institutionnalisée, non institutionnalisée et populaire visant à accroître les capacités autochtones pour éliminer les inégalités sociales, économiques et culturelles en éducation et à améliorer le processus d'enseignement et d'apprentissage. D'autres projets sur l'efficacité de l'établissement de politiques en éducation ont également été financés. Les travaux en Afrique orientale et australe ont porté sur les problèmes fondamentaux de la création d'une capacité individuelle et institutionnelle par le soutien de jeunes chercheurs et des efforts de création de réseaux en Éthiopie, au Botswana, en Zambie, au Lesotho, en Tanzanie et au Swaziland. Le renforcement de la relation entre l'école et la collectivité a été l'objectif d'un projet particulièrement novateur en Ouganda. En Afrique

Au plan de la politique scientifique et technologique, l'accent s'est déplacé des études du changement technique au micro-niveau vers les questions de politique concernant le choix technologique dans les secteurs économiques importants parce qu'ils contribuent à l'emploi, à la valeur ajoutée et aux exportations. Témoignent de ce changement les études sur les changements structureaux et technologiques dans l'industrie turque du vêtement en raison de l'introduction de nouvelles technologies ; celles sur les ajustements technologiques et économiques qui se sont imposés dans l'industrie de la petite métallurgie au Nicaragua et celles sur l'industrie des huiles végétales au Nigéria, sur les petites entreprises de l'aluminium au Ghana, sur les zones de traitement des exportations des produits électroniques en Malaisie et sur l'agro-industrie en Uruguay.

Au sein du programme, la priorité a été également accordée aux études du niveau des affectations nationales de fonds aux structures institutionnelles et au développement de ces structures qui peuvent aider les pays à mieux absorber les technologies importées et implanter les innovations autochtones appropriées. Présentement nous disposons de très peu d'information pour guider les décideurs responsables d'élaborer une infrastructure locale de science et technologie. Conseils des sciences, universités, instituts de recherche industrielle, académies des sciences et systèmes d'information scientifique et technologique ont souvent été empruntés au monde industrialisé et transplantés tels quels. Sont-ils ce qui convient le mieux ? Se sont-ils bien acquittés de leur tâche ? Quelles leçons faut-il tirer de l'expérience de ces pays qui ont mis sur pied de telles organisations ?

Deux projets tenteront de répondre aux questions précédentes, l'un en Uruguay et l'autre en Afrique avec la Commission économique pour l'Afrique. Le premier projet a reçu un petit supplément pour explorer davantage les liens entre les contributions scientifiques et technologiques et les secteurs économiques dynamiques et pour aider les chercheurs qui font au Costa Rica une étude semblable co-financée avec la Division des sciences de l'information du CRDI. Une autre étude en Inde analysera les raisons du succès ou de l'échec d'un certain nombre d'importants instituts scientifiques nationaux. Un projet en Colombie subventionnera une grande étude de la politique scientifique et technologique et des organisations par Francisco José de Caldas (COLCIENCIAS) en collaboration avec le Ministère du Plan et le Centre de l'ONU pour la science, la technologie et le développement scientifique. Un début modeste a été amorcé au Népal par l'attribution d'une subvention à la Royal Nepal Academy of Science and Technology, tandis que le Ministère de la science, de la technologie et de l'énergie de la Thaïlande a reçu un petit supplément pour préparer un document sur la politique scientifique pour le pays. L'année a aussi été marquée par la tenue du dernier séminaire de préparation d'une étude dans plusieurs pays du rôle des banques nationales de développement dans le financement du développement technologique. Le séminaire, organisé par la Banco de la Provincia de Buenos Aires, a réuni des représentants des grandes banques de développement de l'Amérique latine, de même que des participants de l'Inde, de la Corée du Sud et de la République populaire de Chine.

Un certain nombre de projets de recherche sur les conditions sociales et démographiques de maladies comme le paludisme, la lèpre et la maladie de Chagas seront exécutés en Tanzanie, au Kenya, aux Philippines et au Paraguay. Ces projets s'inscrivent dans les efforts du programme pour mieux comprendre les caractéristiques démographiques qui expliquent la morbidité, pour identifier les collectivités où lancer des activités en santé gérées par les collectivités mêmes et pour susciter de la recherche interdisciplinaire.

Le programme a mené à bien un projet interne sur la population, la santé et le développement qui visait à soutenir et à renforcer la capacité des chercheurs des pays en développement et à faire des travaux sur le problème persistant de la mauvaise santé et de la mortalité infantile élevée. Les actes de sept ateliers régionaux en Amérique latine et en Afrique ont été publiés et aussi deux substantielles bibliographies de recherche et quatre importants documents techniques.

Le programme recherche sur la population et le développement a subventionné des projets dans de nouveaux domaines et a consolidé des activités déjà en cours dans d'autres. Un certain nombre d'enquêtes ont été financées en collaboration avec les divisions des sciences de la santé, des communications et des sciences de la terre et du génie. Un réseau de projets de recherche sur la fécondité des adolescentes a été subventionné au Bénin, au Cameroun, au Congo, en Côte d'Ivoire, en Mauritanie, au Mali, au Nigéria et au Sénégal pour étudier les déterminants du début de la vie reproductive à un jeune âge et ses conséquences sur l'état de santé des jeunes mères et leurs enfants. Une autre étude a été financée pour consolider une recherche antérieure sur la fécondité et la contraception en Inde.

Les conditions et l'adaptation des réfugiés en Afrique continuent de retenir l'attention. Les études approuvées en Somalie et au Soudan ont élargi le réseau de recherche qui comprenait déjà le Botswana, le Lesotho, le Swaziland et la Tanzanie. Sur le sujet de la migration de la main-d'œuvre, des projets sur la migration saisonnière au Bangladesh, au Chili et au Mali porteront sur les interrelations entre les changements agricoles et les mouvements de population.

Recherche sur la population et le développement

Au cours de l'exercice 1987-1988, la Division des sciences sociales a révisé son soutien aux scientifiques du Tiers-Monde en le canalisant par cinq programmes : recherche sur la population et le développement, politique scientifique et technologique, développement urbain et régional, politique économique et éducation. En outre, la section « Femmes et développement » a été créée. Cette section, qui fait partie de la Division des sciences sociales et dont le mandat englobe toutes les activités du CRDI, s'engage dans des projets conjoints avec toutes les autres divisions du CRDI.

Sciences sociales
89 projets, 11,4 millions de dollars

L'an dernier, le nombre d'utilisateurs institutionnels de ce service a atteint 122, soit une hausse de 10 %.

fertilité et l'érosion des sols au Népal et un soutien au Centre d'information sur les algues de l'Asie et au Réseau de recherche sur les systèmes d'exploitation agricole de l'Afrique de l'Ouest, avec la Division des sciences de l'agriculture, de l'alimentation et de la nutrition; le Centre d'information et de recherche sur les communications de masse en Asie, avec la Division des communications. Parmi les autres projets financés conjointement par la Division, on retrouve le Système national d'information de la Jordanie et le programme de diplômés en bibliothéconomie et en sciences de l'information offert par la University of the South Pacific, tous deux avec la Division des bourses; un réseau de communications sur les techniques de pompage de l'eau, avec la Division des sciences de la santé; le programme régional de consultation et d'examen de la recherche en éducation en Asie du Sud-Est; le système d'information national pour la science et la technologie du Costa Rica et une recherche sur les langues nationales du Bénin, tous avec la Division des sciences sociales. De tels projets administrés conjointement permettent de tirer pleinement profit des diverses compétences et spécialisations disponibles au CRDI afin d'appuyer des activités de développement multidisciplinaires.

Conformément à l'objectif de la Division qui consiste à promouvoir la coopération et le partage de l'information à l'échelle internationale, plusieurs projets approuvés en 1987-1988 ont nécessité une collaboration importante entre des institutions du Canada et des pays en développement. En association avec le laboratoire de télédétection de l'Université Laval, des scientifiques maliens auront l'occasion d'adapter et d'évaluer l'utilité des méthodes d'analyse des données recueillies par télédétection, dans le cadre d'un projet d'identification de sites favorables à l'agriculture dans la vallée du Niger. Dans le cadre d'un autre projet de coopération, deux institutions canadiennes, le Centre de toxicologie du Québec et le Centre canadien d'hygiène et de sécurité au travail, seront des partenaires importants dans un projet international coordonné par l'OMS. Le projet a pour but de préparer des modules d'information multilingues afin d'aider les pays en développement à planifier et mettre en place leur propre service d'information sur les poisons utilisant des microordinateurs. Dans le cadre d'un troisième projet coopératif, le Bureau des brevets du Canada et la Commission économique pour l'Amérique latine et les Antilles participeront à la mise au point d'un système d'information sur les brevets pour les Antilles.

La bibliothèque du CRDI

La bibliothèque du CRDI a également joué un rôle actif dans la gestion et la fourniture d'informations, non seulement au personnel du CRDI à Ottawa et dans les bureaux régionaux, mais également au personnel de projets appuyés par le CRDI au Canada et dans tous les coins du monde. En 1987-1988, la bibliothèque a subi une importante réorganisation qui devrait lui permettre de jouer un rôle croissant de consultation et de formation pour les projets du CRDI et de traiter plus efficacement la demande croissante de fourniture de documents et de services de référence et de recherche. Le nombre de recherches documentaires informatisées effectuées par la bibliothèque a augmenté de 79 % par rapport à l'année précédente. La bibliothèque offre également ses bases de données sur le développement aux chercheurs canadiens et d'autres pays. Ce service, qui compte déjà onze bases de données, offre l'accès à des données

pour les bibliothèques et pour d'autres applications. Afin d'accroître l'auto-suffisance des utilisateurs de MINISIS, trois projets ont été approuvés dans ce secteur : deux favorisant l'ouverture de « centres locaux de ressources MINISIS », en Chine et en Afrique du Nord et un troisième pour la formation et la solution de problèmes en Amérique latine.

Même si la Division a appuyé un certain nombre de projets innovateurs comme ceux que l'on vient de voir en 1987-1988, elle a également cherché des occasions de donner suite à des projets qui avaient été couronnés de succès par le passé. Il y a quelques années, le CRDI avait appuyé la mise au point du logiciel REDATAM pour microordinateurs qui avait pour objet de fournir aux planificateurs et aux chercheurs un accès pratique aux données de recensement pour des secteurs géographiques restreints. Le logiciel a été mis à l'essai dans trois régions de l'Amérique latine et des Antilles où il a été accueilli avec enthousiasme. En 1987-1988, la deuxième phase du projet a été approuvée ; elle a pour objet de faire du système un outil encore plus utile pour la planification et l'exploitation des résultats des recensements prévus dans la région en 1990. On modifiera la structure de la base de données pour inclure des données dans des domaines autres que la démographie et l'habitation ; pour apporter des améliorations demandées par les utilisateurs ; pour fournir une interface pour un logiciel de cartographie et des systèmes informatisés d'information géographique et pour adapter le système REDATAM aux besoins de planification et de la formation pour les recensements de 1990.

La réussite du projet de création d'un réseau de communications pour les organisations non gouvernementales (ONG) en Amérique latine a fait ressortir les conditions nécessaires à l'expansion de ces réseaux dans les pays en développement. À la suite de cette expérience, la Division envisage d'autres situations où cette méthode pourrait être utilisée. Un projet fondé sur ce concept a été approuvé en Asie en 1987-1988 ; il produira les connaissances nécessaires à l'adoption de techniques modernes de communication des données, tout en renforçant la capacité de recherche grâce à la mise en place de mécanismes plus efficaces de transfert de l'information.

Plusieurs autres projets approuvés en 1987-1988 ont permis de consolider les résultats de phases précédentes qui avaient été couronnées de succès. Par exemple, la Division a appuyé la publication et la distribution de l'Atlas national de l'Éthiopie, qui avait été préparé grâce à une subvention consentie précédemment. Dans d'autres secteurs, de nouvelles phases de financement ont été approuvées en faveur de divers centres et services d'information spécialisés sur le bœuf, les pêches (en Asie), la recherche en éducation (en Asie) et l'administration publique (en Amérique latine).

Collaboration entre divisions

La plupart des projets dans des disciplines particulières sont mis au point en consultation avec les autres divisions du CRDI. Étant donné la convergence des intérêts, un grand nombre de ces projets sont entrepris conjointement. Outre l'important programme interdivisionnaire d'appui à la Bhartiya Agro-Industries Foundation, en Inde, la Division a financé de nombreux projets en collaboration avec d'autres divisions : un projet sur la

Les projets énumérés ci-dessus correspondent aux priorités régulières de la Division. En outre, un nouveau secteur de programme a été adopté en 1987-1988, par suite de la décision de décentraliser la diffusion, la formation et la mise à jour du MINISIS, puisant projeté mis au point par la Division

Les projets décrits jusqu'à maintenant sont d'envergure nationale ou infra-nationale. De nombreux autres projets s'adressent à des bénéficiaires de régions particulières. Par exemple, deux réseaux régionaux d'information sur la formation professionnelle et le perfectionnement des compétences sont appuyés en parallèle en Asie et en Afrique. Dans le domaine de la santé, des services régionaux seront offerts en Afrique occidentale, grâce à l'appui que consent le CRDI au Système africain de documentation et d'information sur les grandes endémies de même qu'au Moyen-Orient et en Afrique du Nord par l'entremise du réseau régional d'approvisionnement en eau et d'assainissement de l'Organisation mondiale de la santé (OMS).

Un autre projet régional renforcera le service d'information et de documentation à la petite industrie qui est offert par la Fédération des Chambres de commerce en Afrique centrale. À une échelle globale, une approche similaire a été adoptée dans le cadre d'un projet qui consiste en un réseau de services régionaux, le Réseau d'information au service du développement international sur la recherche en cours. Le projet a pour but de renforcer les capacités des cinq membres régionaux du Comité inter-régional de coordination des associations de développement et leur permettra d'améliorer leurs services locaux et leurs activités de partage de l'information.

Les projets régionaux

La mise au point d'un système de gestion de l'information sur les pêches à Trinité-et-Tobago est un autre projet qui a une composante expérimentale importante. Ayant reconnu qu'il était essentiel de protéger et de renforcer les ressources halieutiques locales, le gouvernement de ce pays a examiné et adapté des techniques modernes utilisées au Canada et dans d'autres pays afin d'informatiser et de gérer les données sur les pêches. Le système sera utilisé par les planificateurs et offrira également des services consultatifs.

Etant donné l'importance croissante que l'on accorde, au sein de la Division et au CRDI, aux problèmes du développement de l'Afrique et aux moyens de rejoindre les pauvres ruraux, les difficultés particulières attribuables à l'absence d'infrastructure de communication et le problème de la « dernière étape à franchir » sont de plus en plus importants pour les programmes des sciences de l'information. Un projet innovateur avec la Lesotho Telecommunications Corporation mettra à l'essai une nouvelle technologie, la commutation de paquets par radio, qui offre de grandes possibilités pour régler une partie de ces problèmes de façon à la fois économique et relativement simple. L'expérience sera menée en Afrique par des chercheurs africains et il s'agira de la première fois que cette technologie sera envisagée comme composante éventuelle d'un réseau national de télécommunications. Le projet pourrait démontrer à d'autres sociétés nationales de télécommunications qu'il existe des méthodes qui leur permettraient d'étendre leurs services de communication à une plus grande partie de leur population sans les obliger à mettre en oeuvre de grands et coûteux projets.

Enfin, un exemple de projet du programme bâtiment, matériaux et technologies est l'entreprise conjointe du Conseil national de recherches du Canada et de l'Instituto Tecnológico de Costa Rica pour produire des bardeaux d'asphalte bon marché et durables, entièrement à partir de matériaux locaux.

Sciences de l'information 52 projets, 8,6 millions de dollars

Les activités de la Division des sciences de l'information visent trois grands objectifs : améliorer les systèmes, les services et les outils favorisant la gestion et l'utilisation de l'information sur la recherche pour le développement et le changement ; renforcer les capacités locales de gestion et d'utilisation efficaces de l'information et favoriser la coopération et la coordination de la recherche sur le développement grâce à l'échange d'information. La Division s'acquitte de ces tâches en appuyant des projets concrets axés sur des problèmes et des besoins précis en matière d'information dans les pays en développement.

Projets d'envergure nationale

Les projets appuyés en 1987-1988 reflètent la diversité des bénéficiaires-cibles susceptibles de bénéficier d'une information plus facilement disponible, qu'il s'agisse de responsables de la planification nationale ou de collectivités agricoles locales. Un important projet pour venir en aide au gouvernement de la Jordanie constitue un exemple intéressant de réponse globale à la planification et à l'exécution des activités du secteur de l'information à l'échelle nationale. La mise en place d'un système national d'information dans ce pays permettra de renforcer la planification nationale, le processus décisionnel et la recherche, tout en offrant des services aux organisations publiques et privées. Ce projet complexe, auquel participent des spécialistes des différents secteurs de la Division, couvre plusieurs aspects de l'information : la mise en place d'infrastructures de l'information à l'échelle nationale ; l'adoption coordonnée des techniques modernes de l'information ; la diffusion de l'information scientifique, technique et socio-économique et la formation technique. L'expérience acquise en Jordanie pourrait constituer un modèle utile pour d'autres pays.

Les techniques modernes de l'information peuvent également présenter un intérêt plus direct pour les bénéficiaires ultimes de la recherche appuyée par le CRDI. On a couramment recours à la télédétection par satellite afin d'obtenir les données nécessaires à la planification et à l'établissement de politiques. Pour leur part, les pêcheurs artisans du Chili sont les participants à part entière d'un projet de recherche qui fait appel à la télédétection pour découvrir d'éventuelles zones de pêche. Dans le cadre de ce projet, des logiciels et des informations sont mis au point et testés afin d'améliorer les stratégies de prospection des pêcheurs. Un autre projet, qui aura des répercussions concrètes pour les collectivités locales, permettra d'établir un service coopératif d'information parmi les 44 collèges d'agriculture de la Thaïlande. Il comportera une analyse des données sur la gestion de 25 produits prioritaires et permettra la rédaction de manuels pour les agriculteurs, les vulgarisateurs, les étudiants en agriculture et les enseignants.

recherche pour la mise sur pied de petites et moyennes industries de fabrication de matériaux de construction à partir de ressources naturelles locales représente l'essentiel de ce nouveau programme.

Nouvelles orientations

Au cours de l'année 1987-1988, la nouvelle Division des sciences de la terre et du génie a financé de nombreux projets confirmant son orientation actuelle. Dans le cadre du sous-programme hydrogéologie, l'Université du Québec à Montréal est devenue partenaire de l'Université de Miami, au Niger, afin de préciser les caractéristiques des sites à potentiel hydraulique élevé. Grâce aux observations sur le terrain, aux techniques de photo-interprétation et de sondages géophysiques, les hydrogéologues canadiens et africains espèrent accroître les taux de réussite des très coûteux forages. Une autre recherche aux objectifs similaires, dans le Burkina Faso voisin, associe le Centre d'études sur les ressources minérales de l'Université du Québec à Chicoutimi à l'Université de Ouagadougou. Cette deuxième équipe cherchera aussi à évaluer les possibilités de stimuler les forages improductifs par fracturation hydraulique.

Les catastrophiques glissements de terrain qui ont endeuillé le Brésil au début de 1988 soulignent l'importance d'une recherche conjointe de l'Université de l'Alberta et de la Pontificia Universidade Católica de Rio de Janeiro, sur la stabilisation des flancs des spectaculaires collines de la capitale économique brésilienne. Hier, recouvertes par la dense forêt tropicale humide, les pentes accueillent maintenant des centaines de milliers de familles pauvres dans des demeures de fortune. Les chercheurs tenteront de trouver comment stabiliser les pentes auxquelles s'accrochent les pauvres de Rio. En Malaisie, des spécialistes de l'Université McGill travailleront de pair avec leurs collègues de l'Université de Malaya, de l'Université technique de Malaisie et du Service géologique de Malaisie afin de stabiliser les sols des anciens sites d'extraction de l'étain qui ont été comblés et sur lesquels des maisons à loyer modéré ont été construites. Cette recherche en coopération débouchera vraisemblablement sur une toute nouvelle méthode de récupération des sols éventrés par les très nombreuses exploitations minières à ciel ouvert, non seulement en Malaisie, mais aussi en Birmanie, en Indonésie et en Thaïlande. Toujours, dans le domaine de l'extraction minière à petite échelle, la Division a accepté de poursuivre le financement d'un projet prometteur de l'Université de Guelph et de l'Université d'agriculture Sokoto, en Tanzanie. Déjà les scientifiques canadiens et tanzaniens ont identifié plusieurs gisements d'engrais minéraux naturels, susceptibles d'être appliqués presque directement dans les champs des paysans. La poursuite des travaux devrait permettre de préciser la rentabilité du recours à des minerais naturels riches en phosphate.

La Division des sciences de la terre et du génie, dans le cadre du programme de la technologie au service des entreprises locales, a financé plusieurs travaux susceptibles de renforcer des industries créatrices d'emplois. Par exemple, l'Université McMaster et l'Universidad de Concepción, au Chili, ont entrepris de mettre au point un enduit anti-rouille extrait de l'écorce de pin. En Bolivie, l'Université du Québec à Chicoutimi et l'Universidad Mayor de San Simon indiqueront à une vingtaine de petites entreprises boliviennes comment utiliser des huiles, dites essentielles, extraites de l'eucalyptus dans la fabrication de détergents, de savons et de désodorisants.

Un troisième programme, lancé l'an dernier, appartient au domaine complexe de l'habitat pour les sans-abri. Il est intitulé bâtiment, matériaux et technologies. Ce programme se concentre sur l'utilisation des matériaux locaux et sur le développement de techniques de construction permettant d'utiliser des matériaux disponibles localement. La subvention des travaux de

Bâtiment, matériaux et technologies

Un deuxième programme, mis sur pied en 1984, traite de la technologie au service des entreprises locales. Ses champs de concentration, regroupés sous le grand thème de la création d'emplois, seront précisés au cours de l'année à venir. Ils portent principalement sur l'amélioration des techniques traditionnelles fortement utilisées de main-d'œuvre par l'introduction judicieuse et mesurée de certaines techniques nouvelles; deuxièmement, sur le développement de méthodes de transformation des ressources naturelles locales d'origine végétale et minérale, mais aussi d'origine animale.

La technologie au service des entreprises locales

Le premier domaine de spécialisation, créé par la Division en 1983, est celui des sciences de la terre qui compte trois sous-programmes : l'hydrogéologie et l'hydrologie; la géotechnique et le petit secteur minier qui inclut l'agrogéologie. Les deux premiers font appel aux disciplines du génie afin de trouver des solutions aux problèmes environnementaux de nature géologique, tremblements de terre et volcans; aux problèmes d'érosion des sols et d'instabilité des pentes ainsi qu'à l'approvisionnement en eau et à la salubrité de l'eau. Le troisième sous-programme entend subventionner la recherche qui met en valeur et justifie l'extraction et le traitement des ressources naturelles locales, spécialement les minéraux industriels utiles aux plus démunis.

Les sciences de la terre

Au cours des années, la Division s'est penchée sur un grand nombre de sujets de recherche qui ont été regroupés en trois programmes principaux. Au cours de l'exercice financier 1987-1988, la Division a changé de nom et s'appelle désormais « Division des sciences de la terre et du génie » afin de mieux refléter ses principaux domaines d'intervention. Le nouveau nom indique aussi une redéfinition de ses activités, car seuls les programmes décrits ci-après sont désormais admissibles pour fins de subvention.

Trois objectifs majeurs ont orienté les activités de la Division depuis sa création : premièrement, le développement de la capacité de recherche scientifique et technique des institutions et associations participantes du Tiers-Monde; deuxièmement, la création de voies de communication et d'échange entre scientifiques du Canada et des pays en développement et troisièmement, l'incitation faite aux groupes canadiens de recherche participants à s'intéresser de façon tangible aux problèmes de plus en plus nombreux et divers qui entravent le développement du Tiers-Monde.

Les institutions des pays du Tiers-Monde jouissaient presque en exclusivité des subventions du CRDI. En 1980, les institutions des pays en développement et celles du Canada, jusque-

Un autre projet des systèmes de santé tentera d'évaluer, à l'aide de normes de comparaison établies, l'efficacité d'un type particulier de travailleurs en soins primaires en Indonésie.

Santé et environnement

Le programme santé et environnement comporte de la recherche sur les éléments physiques et biologiques de l'environnement qui influent directement ou indirectement sur la santé des pauvres. Ce nouveau programme inclut des projets financés par les anciens secteurs de la Division, projets axés sur les problèmes de santé déterminés par les experts internationaux, régionaux et nationaux. Les besoins et les priorités de santé, identifiés par les collectivités, qui exigent une approche disciplinaire ou une recherche axée sur un sujet, sont compris dans ce programme, tout comme les travaux de recherche visant à créer les technologies appropriées pour maintenir et améliorer la santé des pauvres.

Pour favoriser une meilleure compréhension des facteurs environnementaux liés à la santé et de la nature de l'interaction entre les collectivités et leur environnement, le programme santé et environnement encouragera également la discussion et la recherche sur les sujets suivants jugés importants du point de vue du programme : l'eau et son utilisation, plus particulièrement l'accès à l'eau potable, la qualité de l'eau, le milieu de vie, les facteurs présents dans ce milieu et dans le milieu de travail que constituent les industries tant rurales qu'urbaines.

Plusieurs projets du programme représentent diverses phases de la création et de l'utilisation de technologies comme celle de l'hydraulique en Chine, en Éthiopie, au Kenya, en Malaisie et à Sri Lanka. La recherche sur la bilharziose en Égypte constitue une autre étape de l'évaluation d'un extrait végétal, simple et peu coûteux à obtenir, comme moyen utilisable dans les collectivités pour tuer le mollusque qui forme le lien vital dans la transmission de la maladie à l'homme. En Bolivie, l'état de santé des mineurs de l'étain et de leurs familles fait l'objet d'une étude visant à améliorer leur milieu.

Deux autres projets approuvés l'année dernière font état des activités entre divisions et de collaboration de la Division. Le premier réunit l'Université Tribhuvan du Népal et l'Université de Calgary et, au CRDI, les divisions des sciences de la santé et des sciences sociales dans une étude pour obtenir des données de base sur la qualité de la vie afin d'évaluer par la suite les interventions par des collectivités népalaises. Dans le second, la Division des sciences de la santé collabore avec la Division des sciences de la terre et du génie pour étudier la qualité de l'eau souterraine dans les régions perturbées densément peuplées de Dar es-Salaam en Tanzanie.

Sciences de la terre et du génie **26 projets, 7,8 millions de dollars**

La Division des sciences de la terre et du génie est le nouveau nom de l'ancienne Division des programmes de coopération, cette dernière ayant son origine dans la Conférence des Nations Unies sur la science et la technique au service du développement, tenue à Vienne en 1979. Constitué au début en section, puis en division du CRDI, les programmes de coopération ont débuté au cours de l'exercice 1980-1981. Les programmes de coopération

une grande importance à l'étude du type de collectivités qui devraient participer aux travaux et aux méthodes à employer pour leur permettre de définir leurs besoins et leurs priorités en santé, tout comme au lancement d'actions publiques visant à trouver les moyens de répondre à ces besoins.

Au cours des cinq prochaines années, le programme santé et collectivité définira ou coordonnera plusieurs thèmes qui se chevaucheront avec d'autres programmes de la Division des sciences de la santé, d'autres divisions du CRDI et d'autres organisations. Ces thèmes incluront l'introduction et l'emploi de technologies, le comportement et la transmission de maladies transmissibles, les méthodes qui favoriseront la recherche participative, la promotion de la santé des femmes et des enfants, l'enseignement de l'hygiène et les stratégies pour améliorer la nutrition des femmes et des enfants.

Au cours du dernier exercice, le programme a approuvé un projet de participation pour étudier le rôle des femmes dans les soins de santé dans six pays asiatiques et pour déterminer tant les besoins de santé que les moyens à prendre pour améliorer les soins de santé au niveau des collectivités.

Un autre important projet examinera la gestion de la santé des citadins pauvres dans quatre villes de l'Asie, tandis qu'en Amérique latine, l'étude sur le soutien psycho-social et le résultat des grossesses marquera l'aboutissement du travail en santé périnatale antérieurement subventionné dans la région. L'étude en réseau dans quatre pays vise à montrer que les interventions psycho-sociales au foyer ont une influence positive, à la fois biologique et psychologique, sur le résultat des grossesses. L'étude est susceptible d'avoir d'importantes répercussions sur l'organisation des services de santé.

Les systèmes de santé

Le programme systèmes de santé lie la collectivité et ses besoins de santé aux systèmes de soins de santé et aux services offerts ou requis. Ces systèmes vont des ministères de la santé et des installations de soins tertiaires aux dispensaires et aux services de santé traditionnels dans les villages. Le programme comportera de la recherche sur les personnes indiquées pour fournir des soins, sur le programme nécessaire à leur formation et sur l'infrastructure requise pour leur donner un soutien durable et pour gérer les systèmes. Le programme compte quatre grands thèmes : gestion et prestation de services de santé, planification des services de santé, politique sanitaire et renforcement de la capacité de recherche des établissements autochtones. Les projets de recherche en cours sur les services de santé sont en train d'être incorporés au programme.

Le premier projet avec la Palestine Red Crescent Society concerne l'évaluation de l'administration et de la gestion des services de santé. L'étude vise à améliorer la prise de décision et l'affectation de ressources à la santé des Palestiniens. Au Soudan, une étude importante évaluera quelle influence l'arrivée massive de réfugiés de pays avoisinants a eue sur l'évolution, la structure et la prestation des services de santé tant aux réfugiés qu'aux autochtones, tout en déterminant les répercussions pour d'autres régions aux prises, elles aussi, avec des réfugiés.

Huit projets en production animale et végétale dans six pays d'Amérique latine collaboreront pour identifier les facteurs déterminants de l'adoption des nouvelles technologies dans les programmes de recherche sur les systèmes agricoles. Une nouvelle initiative a été entreprise au Maghreb avec trois projets sur les systèmes pastoraux pour tenter de définir les priorités de recherche de demain. Deux autres programmes de la division des SAAH et la section « Femmes et développement » participent à ces projets. On espère en outre que la Division des sciences sociales se joindra à la seconde phase des activités.

Conformément à l'accent nouvellement mis sur la participation des pauvres au processus de recherche, et en collaboration avec d'autres programmes, les divisions du CRDI et les agences subventionnaires internationales, deux nouvelles activités sur la production de protéines végétales à partir des oléagineux au Kenya et sur la gestion des ressources naturelles sur les terres communales au Zimbabwe ont été entreprises en Afrique orientale et méridionale. Les deux projets ont pour caractéristique de réunir toutes les parties concernées afin de fixer des objectifs avant d'entreprendre des activités de recherche détaillées.

Sciences de la santé 72 projets, 12,8 millions de dollars

La Division des sciences de la santé a terminé l'étude et l'analyse de son fonctionnement au milieu de 1987 et s'est alors réorganisée en trois programmes fonctionnels et interdépendants qui sont principalement axés sur les populations et leurs collectivités : santé et collectivité ; systèmes de santé et santé et environnement. La Division croit que ce faisant elle sera mieux en mesure d'accomplir sa mission efficacement et de mettre sur pied un ensemble équilibré d'activités qui contribueront directement à l'amélioration de la santé et du bien-être des pauvres.

Santé et collectivité

Le programme santé et collectivité déterminera et mettra sur pied des initiatives de recherche-action dans les collectivités mêmes. Il privilégiera les projets qui examineront comment les conditions économiques et sociales et le comportement humain influent sur la santé. Il y aura, complètement, des projets qui porteront sur les stratégies pour améliorer la santé des personnes, des familles et des collectivités et qui les feront participer à l'application des solutions réalisables.

La recherche subventionnée par le programme santé et collectivité comptera sur la participation des collectivités dans leur propre milieu social, économique et environnemental et l'exploration portera sur plusieurs domaines. Le programme financera des recherches sur les facteurs sociaux, culturels et économiques influant sur l'acceptation ou le rejet par une collectivité de l'information sur les types de comportement qui amélioreront la santé de ses membres, la maintenance ou lui nuisent. Elle insistera sur l'expérimentation de moyens de transmission efficace de l'information et du savoir sur la santé et sur l'introduction de technologies agissant sur la santé collective de même que sur les moyens d'inciter les collectivités à employer correctement et régulièrement l'information ou à employer et à maintenir comme il se doit les nouvelles technologies. Le programme accordera aussi

Un projet relativement important a été élaboré et financé conjointement par l'Agence canadienne de développement international (ACDI) pour mettre en place dans les six pays de l'Association des nations de l'Asie du Sud-Est des programmes post-école plus solides et mieux orientés.

L'amélioration de la nutrition a été le thème central du programme tout au cours de l'année. En plus de financer un projet sur les aliments des nourrissons en Inde et de contribuer à un document d'un groupe de travail du CRDI sur la nutrition, le programme de post-production a financé trois études de développement de programmes et un atelier, ce dernier portant sur l'application des technologies domestiques pour l'amélioration de l'alimentation des jeunes enfants, financé conjointement par la Division des sciences de la santé du CRDI et l'UNICEF. Les études comprenaient une évaluation des besoins dans les régions rurales de l'Inde, mettant en oeuvre des techniques de diagnostic rapide en milieu rural empruntées à la méthodologie de la recherche sur les systèmes agricoles et une évaluation du rôle et des possibilités offertes par les organisations non gouvernementales (ONG) pour dispenser les programmes de nutrition en Inde.

L'introduction de systèmes de mouture et de décortiqueurs continue à composer une portion importante du programme en Afrique semi-aride où les grains bruts occupent une place importante dans l'alimentation. Ces projets avaient d'abord mis l'accent sur la conception d'équipement, point d'entrée nécessaire mais qui s'est avéré insuffisant. On s'attache maintenant à comprendre les besoins des bénéficiaires et à améliorer leur sécurité alimentaire. Les projets financés ont porté sur l'utilisation du sorgho en Tanzanie, la commercialisation des produits du sorgho au Kenya et au Lesotho et la mise à l'essai d'un décortiqueur au Kenya, au Niger et en Gambie.

Economie agricole

Le programme a continué de contribuer à la question centrale de l'endroit, du moment et du coût appropriés pour le séchage des récoltes dans des systèmes alimentaires donnés. Un projet reliant des chercheurs de l'Université Queen à des collègues dans cinq pays de l'Afrique de l'Ouest a été approuvé pour améliorer les séchoirs solaires employés dans les fermes. Le projet poursuit en laboratoire des études de thermodynamique appliquée et des simulations informatiques avec la mise à l'essai de modèles améliorés, dans diverses conditions et avec différents aliments.

La principale activité du programme d'économie agricole est toujours l'intégration des sciences sociales au développement et l'introduction de la technologie en milieu rural. Au cours de l'année, on a mis davantage l'accent sur les aspects institutionnels du changement technologique. La disponibilité du crédit est un important facteur de l'introduction de la technologie et au Sénégal, un projet très innovateur a été financé sur l'épargne et le crédit paysans, qui appuie les organisations de fermiers et les encourage à créer leurs propres institutions rurales de crédit. Un nouveau projet sur l'économie de la qualité du riz sur les marchés internationaux réunit les chercheurs en biologie et en sciences sociales de l'Institut national de recherches sur le riz et huit pays asiatiques pour déterminer la valeur relative que les pays accordent à chacune des principales caractéristiques du grain de riz. Ces renseignements aideront les biologistes à se donner des priorités de recherche.

Les objectifs du programme étant reliés aux facteurs de production et aux facteurs socio-économiques, étroits rapports de travail ont été entretenus avec les autres divisions du CRDI et les autres programmes de la Division des SAAN. Des 18 projets financés durant l'année, neuf comportaient un élément de collaboration directe. Un projet de petites subventions a été financé en Asie avec le programme des pêches, trois projets sur les pêches ont été financés en Amérique latine avec le concours du programme des pêches et du programme d'économie agricole, un projet de systèmes de décortiquage et de mouture a été financé en Gambie en collaboration avec le programme d'économie agricole, et enfin, un projet de production et mise en marché d'oléagineux en Cisjordanie a été financé conjointement avec le programme des systèmes de production animale et végétale. Deux projets de post-production ont reçu des fonds additionnels de la Division des communications pour promouvoir l'application des résultats de recherche sur les décortiqueurs d'arachides en Thaïlande et l'entreposage du maïs au Togo. Un projet d'amélioration de l'arachide aux Philippines a émergé d'une étude sur la commercialisation de l'arachide dans ce pays.

Le programme des systèmes de post-production a continué en 1987-1988 à se consacrer à l'application des résultats de recherche et à l'adaptation de la technologie pour répondre aux besoins en alimentation et en revenus de collectivités en majorité rurales. La disponibilité et la qualité des aliments est un objectif clé du programme, qui comporte trois sous-programmes : transformation, utilisation des aliments et aspects nutritionnels ; manutention, entreposage et séchage ; conception, adaptation et expérimentation du matériel agricole. Ces sous-programmes visent donc respectivement à transformer et apprêter les denrées alimentaires de base pour les rendre plus acceptables, plus abordables et plus nutritives ; assurer une première stabilisation des aliments ainsi que leur conservation et leur distribution et, enfin, déterminer les équipements appropriés et leur application aux problèmes spécifiques soulevés dans les deux premières catégories d'activités.

Les systèmes de post-production

Enfin, un autre exemple intéressant des nouvelles approches adoptées pour les programmes d'aide du CRDI est le récent projet de petites subventions approuvé pour la Asian Fisheries Society. On s'attend à ce que ce projet puisse offrir un appui crucial aux jeunes halieuticiens de cette région, en vue d'accroître leur nombre et la qualité de leur formation, de même que pour contribuer au développement de la Asian Fisheries Society à titre d'organisme régional de promotion des activités dans le domaine des pêches.

En outre, le programme d'économie agricole et le programme des pêches de la Division des SAAN et la Division des sciences sociales ont financé conjointement la troisième phase du Réseau des sciences sociales sur les pêches.

En outre, le programme des communications. L'important du programme des pêches et les contributions de la Division subvention de création d'une nouvelle institution réunit l'appui financier Qingdao, province de Shandong, en République populaire de Chine. Cette formation en mariculture au Yellow Seas Fisheries Research Institute de

Le programme des pêches a continué à prendre de l'expansion en 1987-1988. En Amérique latine, le Réseau de recherche en aquaculture continue à grandir et une série de projets conjoints auxquels participent d'autres programmes de la Division a été élaborée. Par exemple, un projet de développement aquicole en Colombie et un projet de systèmes maricoles au Chili ont été approuvés cette année. Le coordonnateur du réseau est installé en Colombie et joue un rôle clé pour diriger ces activités. Le réseau produit maintenant un bulletin d'information et est en voie de mettre en oeuvre des groupes d'étude spécialisés pour examiner certaines technologies aquicoles, telles la génétique, la reproduction et l'élevage des larves de poisson. Les projets sur les pêches artisanales dans cette région passent maintenant en phase de mise en oeuvre, selon un plan intégré de développement côtier. Au cours de l'année, on a redoublé d'effort dans le domaine de l'aquaculture et des pêches artisanales en Afrique. De nouveaux projets de pisciculture en Côte d'Ivoire et en Mauritanie, plus un projet d'élevage et d'aquaculture intégrés au Cameroun ont grandement élargi les activités d'aquaculture financées par le CRDI sur ce continent. Une importante composante d'économie aquicole était essentielle en Côte d'Ivoire et en Mauritanie afin de mettre au point des systèmes appropriés pour les petits exploitants.

Les pêches

La participation du programme de foresterie à un projet visant à combattre la maladie de Chagas au Paraguay constitue un autre exemple de collaboration interdivisionnaire. Les insectes porteurs de cette maladie font leurs nids dans les maisons de bois de la région et les spécialistes paraguayens du bois d'oeuvre s'efforceront de mettre au point des améliorations simples à la conception des maisons afin de réduire le danger d'infection. Enfin, la coopération entre le programme de production animale et végétale et le programme agricole est maintenant chose habituelle quand il s'agit d'élaborer et de suivre le déroulement de projets dans le domaine prioritaire de l'agroforesterie.

La deuxième phase d'une étude sur les pêches artisanales en Casamance, au Sénégal, est particulièrement intéressante, puisque la première phase de ce projet avait été financée exclusivement par la Division des sciences sociales du CRDI, alors que la deuxième phase réunira les Divisions des communications et des sciences sociales, de même que le programme d'économie agricole de la Division des SAAN. En effet, on a reconnu que la plupart des activités du domaine des pêches exigent une approche multidisciplinaire globale et le programme s'attend à recevoir un nombre croissant de propositions comportant des aspects économiques et de mise en oeuvre.

En Asie, les réseaux actuels sur les maladies, les systèmes agricoles et la nutrition se sont élargis avec de nouveaux projets en Indonésie, aux Philippines et en Thaïlande. Notons particulièrement l'important projet interdivisionnaire sur la création d'un centre international de recherche et de

acceptées par de nombreux petits agriculteurs et en seconde phase, on s'efforcera particulièrement de mesurer l'étendue de l'adoption des résultats de recherche et son impact.

La foresterie

Du côté du programme de foresterie, on appuie toujours la foresterie sociale, ou intégrée, qui vise à répondre aux besoins des collectivités villageoises et des petits propriétaires terriens. La recherche sur l'amélioration de l'énergie dérivée du bois dans les régions rurales et urbaines et l'intégration des arbres dans les systèmes de culture et d'élevage sont maintenant les priorités du programme. L'objectif est de mettre au point des technologies simples que les collectivités rurales pourront facilement mettre en œuvre. Ces priorités ont été fixées dans le contexte du grand thème de la Division, accroître la disponibilité de la nourriture. De toute évidence, le programme de foresterie peut rarement contribuer directement à la production alimentaire. Cependant, sa contribution à la recherche sur les systèmes de production intégrés et les sources d'énergie tend à la réalisation de l'objectif premier de la Division. De même, en contribuant à d'autres domaines de la recherche forestière, par exemple sur le bambou et le rotin, le programme se consacre à des domaines susceptibles de générer des revenus, ce qui correspond également à l'objectif d'un meilleur accès à la nourriture ou à l'achat de nourriture.

Certaines initiatives entreprises au cours de la dernière année méritent d'être plus spécialement signalées. En Asie, un nouveau projet régional réunit quatre pays et huit institutions dans un effort de recherche sur l'utilisation du bois de palmier. La tige du cocotier, du palmier à huile et d'autres palmiers pourrait être source de bois d'œuvre dans de nombreux pays de l'Asie du Sud-Est, et cette entreprise conjointe de recherche permet d'éviter le doublement des efforts et d'assurer le partage des avantages. Au Pakistan, un projet permettra de transférer une technologie mise au point dans le cadre d'un autre projet en cours en Chine sur la culture intercalaire du blé et du paulownia, un arbre à usages multiples. Les chercheurs du projet chinois assureront le soutien technique nécessaire au projet pakistanais.

Deux autres projets dans le domaine de l'agroforesterie sont particulièrement intéressants. Le premier, un nouveau projet au Zimbabwe, étudiera les effets à court et à long terme sur la fertilité des sols de diverses essences d'eucalyptus, se penchant plus spécialement sur les interactions constatées entre certaines essences et les récoltes qui croissent avec elles dans des systèmes intégrés. Le second est un projet en cours au Pérou pour élaborer des systèmes d'agroforesterie pour les petits agriculteurs du bassin de la haute Amazonie. Après une première phase réussie de production technique, on se concentrera en deuxième phase sur les aspects économiques et la transmission de ces technologies aux agriculteurs. Ce projet est étroitement relié à celui des arbres fruitiers autochtones au Pérou, approuvé l'an dernier.

Le soutien à la recherche sur le bambou et le rotin continue à être l'un des grands thèmes du programme, non seulement en Asie du Sud-Est, mais également en Afrique et en Asie du Sud. En tout, 19 projets sont maintenant

Par ailleurs, un groupe de projets sur les systèmes rizipiscicoles a débuté en 1986-1987 avec un projet dans le Nord-Est de la Thaïlande. En 1987-1988, un second projet d'intégration de la pisciculture et de la riziculture a été mis en chantier en Indonésie. On a démontré que la pisciculture dans les casiers rizicoles a des effets bénéfiques sur les rendements des rizières, la production de poisson contribuant du même coup à l'amélioration de l'alimentation et des revenus. Un autre projet a été entrepris au cours de l'année sur la gestion des élevages de canards de Barbarie pour la production de viande en Thaïlande.

En 1987-1988, on a également entrepris des recherches dans un nouveau domaine, celui des animaux de trait. Selon de récents estimés, environ la moitié des terres en culture dans les pays en développement sont labourées à l'aide d'animaux de trait, et ce pourcentage est beaucoup plus élevé encore dans certaines régions d'Asie. La recherche sur les animaux de trait, particulièrement le buffle, a été négligée et on en sait bien peu sur les contraintes en matière d'énergie et de main-d'œuvre dans les petites fermes, sur la contribution possible des animaux de trait et sur la prédisposition des paysans à consacrer une portion de leurs minces ressources de temps ou d'argent à réduire ces contraintes. Pour tenter d'explorer ces questions, trois projets parallèles ont été financés aux Philippines, en Thaïlande et en Inde.

Dans le domaine de la production végétale, une nouvelle initiative a été financée pour faire la mise à l'essai de la triticales sur de petites fermes en Syrie. Le CRDI a financé plusieurs projets sur la triticales dans les années 70, mais peu ces dernières années. La triticales, hybride synthétique de blé et de seigle, donne de bons rendements dans les régions pluvieuses cependant trop sèches pour le blé panifiable. Son contenu protéinique est bon et son rendement supérieur à celui de l'orge dans les conditions d'humidité maximales que cette céréale peut supporter.

Le Réseau de recherche de l'Afrique de l'Est et de l'Asie du Sud sur les oléagineux a continué à prendre de l'expansion en 1987-1988. Le projet initial de création du réseau a été renouvelé et continué à assurer le soutien du conseiller du réseau, qui travaille à partir de l'Éthiopie. En outre, les projets nationaux à Sri Lanka et en Éthiopie ont été renouvelés pour une deuxième et troisième phase, respectivement. Le projet à Sri Lanka a fait d'excellents progrès pour l'élaboration de lignées améliorées de sésame et d'arachide. Ces plantes sont maintenant mises à l'essai dans les champs de quelques districts de la région sèche du pays. En Éthiopie, de nouveaux cultivars à fort rendement de colza, sésame et arachide ont été introduits et la mise à l'essai sur la ferme permet de croire qu'il sera possible d'accroître substantiellement les rendements en combinant des variétés améliorées et de meilleures pratiques agronomiques pour un grand nombre de récoltes d'oléagineux, dont le niger, le lin, le colza, la moutarde et le tournesol. De nouvelles initiatives de recherche sur le sésame ont également été entreprises au cours de l'année aux Philippines et au Tamil Nadu, en Inde.

La recherche sur les systèmes culturels continue à figurer parmi les grandes priorités. Un projet en Jamaïque a été renouvelé pour une seconde phase. Au cours des trois premières années du projet, on a élaboré et mis à l'essai avec succès sur la ferme plusieurs cultivars et des systèmes de production améliorés pour le maïs, le sorgho, le plantain, la pomme de terre, l'igname, le chou et la passiflore. Ces nouvelles technologies ont été bien

particulière à l'agroforesterie, c'est-à-dire l'intégration des espèces ligneuses vivaces aux systèmes agricoles. En effet, non seulement de tels systèmes fournissent-ils du carburant, du bois d'œuvre, du fourrage, des aliments et bien d'autres produits, mais les arbres et les arbustes peuvent aussi jouer un rôle important dans le recyclage des substances nutritives et la stabilisation des sols, qu'ils protègent de l'érosion.

En collaboration avec le programme de foresterie, le programme des SPAV a parrainé en 1987-1988 trois nouveaux projets d'agroforesterie : la collection d'arbres légumineux de l'espèce *Sesbania* en Tanzanie, la lutte biologique en Asie contre le psylla, insecte ravageur du *Leucaena*, et l'élaboration, au Mali, de systèmes de culture en couloirs où des récoltes sont cultivées entre des rangées de haies d'arbres ou d'arbustes dont les coupes servent de fourrage au bétail ou de pailles. Le programme a également contribué à la seconde phase de deux projets initialement financés exclusivement par le programme de foresterie, au Pérou et au Kenya. Au Kenya, la nouvelle phase assurera la mise à l'essai et la diffusion à grande échelle de certaines des nouvelles technologies élaborées en première phase, particulièrement en ce qui concerne les haies vives employant les espèces *Caesalpinia*, *Parkinsonia* et *Zizyphus*, et l'amélioration des pâturages grâce aux acacias et aux espèces *Leucaena* et *Prosopis*.

Une autre initiative amorcée cette année a été le parrainage d'un projet de recherche innovateur au Népal sur l'érosion des sols, projet de coopération auquel participent la Integrated Soil Survey Section du gouvernement du Népal et l'Université de la Colombie-Britannique à Vancouver. Le projet se propose d'étudier l'étendue, les causes et les effets de l'érosion des sols sous diverses pratiques de gestion des terres agricoles à flanc de colline au Népal, dans le but de mettre au point des systèmes viables d'exploitation. La viabilité des systèmes d'exploitation des terres a également été le thème de trois projets interreliés sur l'agropastoralisme dans les pays maghrébins de l'Algérie, du Maroc et de la Tunisie.

Vers la fin de 1986, le CRDI et le Programme d'aide à la recherche coopérative sur les petits ruminants de l'USAID (U.S. Agency for International Development) ont conjointement contribué à parrainer un atelier sur les systèmes d'élevage de petits ruminants en Asie du Sud et du Sud-Est. Les participants ont souligné l'immense potentiel qu'offrent les systèmes d'arboriculture pour l'alimentation des moutons et des chèvres dans cette région, où environ 20 millions d'hectares sont en arboriculture permanente. Suite à l'atelier, un grand nombre de propositions de projets ont été préparées en vue de l'intégration de l'élevage de petits ruminants avec des cultures vivaces. Le premier de ces projets a été financé en 1987-1988 et vise à employer plus efficacement l'espace entourant les cocotiers et la végétation qui y croît naturellement pour accroître la production de viande, principalement de chèvre.

Etant donné leur importance pour les systèmes d'élevage à petite échelle, on continue aussi à accorder une grande priorité à la recherche sur les petits ruminants dans les environnements rigoureux et dans les régions de l'Afrique qui ne se prêtent pas à l'élevage du bétail en raison de la trypanosomiasse transmise par la mouche tsé-tsé. Un projet au Zimbabwe visant à accroître la production de chèvre et de mouton grâce à une amélioration des méthodes de gestion et d'élevage a été renouvelé pour une seconde phase. L'élevage de la chèvre fait également l'objet principal d'un nouveau projet au Népal.

La recherche de systèmes viables est à la base d'un grand nombre de projets parrainés par le programme des systèmes de production animale et végétale (SPAV). On a par exemple accordé en 1987-1988 une attention

Les systèmes de production animale et végétale

L'élaboration de systèmes viables d'exploitation des sols est devenue à la fois un objectif du programme et un facteur fondamental à considérer dans toutes les activités des programmes de la Division. On retrouvera ces grands thèmes dans les exemples suivants, qui illustrent les activités des cinq programmes de la Division. Par ailleurs, la Division des SAAN établit des liens plus soutenus avec les autres divisions et collabore à leurs nouvelles initiatives. Par exemple, la Division des SAAN a contribué à financer la création de la nouvelle section « Femmes et développement » au sein de la Division des sciences sociales, et elle a ajouté à ses programmes des considérations relatives au rôle des sexes.

La Division des sciences de l'agriculture, de l'alimentation et de la nutrition (SAAN) a pour objectif primordial d'accroître la disponibilité de la nourriture pour les individus. Pour réaliser cet objectif, il faut adopter des stratégies au-delà de la simple augmentation de production alimentaire. Il faut voir à assurer la répartition équitable des avantages découlant de la production agricole et le pouvoir d'achat des pauvres urbains et ruraux. C'est pourquoi on se préoccupe de plus en plus de la nécessité d'accroître les sources de revenus et d'emplois dans le système de production et d'exploitation des ressources naturelles renouvelables. En outre, le souci d'améliorer la qualité des aliments a entraîné l'intensification des programmes en nutrition.

Sciences de l'agriculture, de l'alimentation et de la nutrition 107 projets, 26,5 millions de dollars

La Division offre également la bourse John G. Bene en foresterie sociale, qui est administrée par le CRDI mais financée par un legs de la succession de feu John G. Bene, ancien gouverneur du CRDI, et par des dons publics. La bourse est octroyée à un étudiant de cycle supérieur en foresterie dont les travaux de recherche portent sur les problèmes et les promesses de la foresterie pour le développement économiquement et socialement.

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Dans le cadre du programme de formation axée sur les carrières en développement (Canada), la Division offre des bourses «jeunes chercheurs canadiens» à des étudiants qui poursuivent des études de doctorat dans une université canadienne. Le programme veut les encourager à s'intéresser à des domaines scientifiques où oeuvre le CRDI, tout en les sensibilisant aux problèmes du Tiers-Monde. Les candidats à un doctorat dans les domaines

Formation axée sur les carrières en développement (Canada)

Dans le cadre de son programme de formation spécialisée, la Division continue d'offrir les bourses Pearson. Du nom de l'ancien premier ministre canadien Lester B. Pearson, qui fut président du Conseil des gouverneurs du CRDI de 1970 jusqu'à sa mort en décembre 1972, les bourses Pearson sont offertes à de jeunes fonctionnaires de pays en développement qui travaillent pour leur gouvernement depuis au moins trois ans. Les candidats sont proposés par l'entremise des missions canadiennes à l'étranger et des bureaux régionaux du CRDI. Les boursiers Pearson demeurent de neuf à douze mois au Canada pour y suivre un programme associant un stage dans un ministère du gouvernement à des cours universitaires qui ne sont pas sanctionnés par un diplôme. Tous les boursiers Pearson participent à un programme spécial d'études en administration publique conçu conjointement par l'École d'administration publique de l'Université Carleton et la Faculté d'administration de l'Université d'Ottawa. La liste des 17 boursiers Pearson pour 1987-1988 figure à la page 81.

Formation spécialisée

En plus des bourses individuelles dont on trouvera la liste à la page 81, le CRDI a financé l'inscription à l'Académie de droit international de La Haye de 28 jeunes stagiaires en provenance de pays en développement, soit 21 pour un cours de 3 semaines et 7 pour des études de doctorat.

La Division continue de collaborer avec les autres divisions de programme dans le cadre de projets liés aux activités de recherche qu'elle appuie. Cette collaboration peut prendre la forme du co-financement de projets de formation. Cependant, la Division assure aussi la conception et la coordination de programmes de formation financés par d'autres divisions. Par exemple, la Division collabore actuellement avec la Division des sciences de la santé à la mise sur pied d'un programme de formation visant à améliorer la recherche sur les services de santé à Sri Lanka. Ce programme fera appel à un regroupement d'écoles de médecine canadiennes travaillant par l'entremise de la Société canadienne pour la médecine tropicale et la santé internationale.

d'être soulignées : l'appui que la Division continue d'accorder au programme d'études supérieures en économie rurale du Centre ivoirien de recherches économiques et sociales (CIREs) de la Côte d'Ivoire et le programme de maîtrise de la Consortium Graduate School qui, même s'il est offert à l'Université des Indes occidentales, en Jamaïque, s'adresse aux étudiants de la Guyana, du Suriname et des Grandes Antilles. Au cours de la dernière année, la Division a également offert son appui à un réseau de doyens et de coordinateurs d'études supérieures d'universités d'Afrique orientale et australe en vue de renforcer les programmes d'études supérieures dans la région.

avril, en juillet et en octobre. Les versions anglaise et espagnole du magazine s'intitulent *The IDRC Reports* et *El CIID Informa*. De plus, un numéro spécial annuel est publié en arabe.

Films

L'année dernière, le CRDI a produit un film documentaire intitulé *Le bambou, plante miraculeuse*. Le film d'une durée de 27 minutes retrace les multiples usages de cette plante exceptionnelle et examine les efforts entrepris par les chercheurs d'Asie pour assurer sa protection et son développement.

Comme tous les documentaires produits par le CRDI, *Le bambou, plante miraculeuse* est disponible en version 16 mm ou sur support vidéo selon les formats U-matic, VHS et Betamax et selon les standards NTSC, PAL ou SECAM. On peut obtenir sur demande un catalogue des films produits par le CRDI.

Division des bourses

27 projets, 3,0 millions de dollars

La Division des bourses, de concert avec les divisions de programme du CRDI, est un partenaire actif des projets de formation et de perfectionnement à l'intention des administrateurs d'instituts de recherche, des gestionnaires de la recherche et des chercheurs eux-mêmes. Ses divers programmes sont conçus pour répondre aux besoins en matière de formation qui sont déterminés par les spécialistes des divisions de programme, à Ottawa et dans les bureaux régionaux, et la plupart des bourses sont accordées selon les recommandations du personnel des divisions de programme.

Le principal objectif des activités d'appui de la recherche du CRDI est d'accroître les capacités de recherche des instituts du Tiers-Monde. La Division s'efforce d'atteindre cet objectif en offrant diverses catégories de bourses qui varient en nature et en nombre selon l'évolution des besoins perçus par le CRDI. Les bourses sont attribuées principalement à des bénéficiaires des pays les moins avancés et la plus grande partie du budget de la Division est consacrée à des bourses de formation individuelle, qui mettent l'accent sur le perfectionnement professionnel plutôt que sur la formation de base. La formation est dispensée dans des centres d'excellence qui sont situés, par ordre de priorité, dans le pays d'origine, dans la région, au Canada ou dans un autre pays industrialisé; si la formation a lieu à l'extérieur du pays d'origine, on s'attend du boursier qu'il retourne ensuite dans son pays.

Les activités de la Division relèvent de cinq programmes : élaboration des projets ; élaboration des programmes ; développement institutionnel ; formation spécialisée et formation axée sur les carrières en développement (Canada).

Elaboration des projets, élaboration des programmes et développement institutionnel

Les trois premiers programmes reflètent un changement graduel dans l'échelle des priorités, qui privilégient désormais le renforcement des capacités des instituts du Tiers-Monde. À cet égard, deux projets à long terme méritent

favorisera la diffusion du paulownia non seulement dans quatorze provinces du Nord et du Sud de la Chine, mais aussi en Amérique du Sud.

Lors de la réunion du Conseil des gouverneurs du CRDI, à Nairobi (Kenya), en mars 1988, les gouverneurs ont visité le site d'une recherche en agroforesterie dont les résultats seront diffusés auprès des exploitants agricoles par l'intermédiaire des écoliers et des associations communautaires. Ce projet, appuyé par les divisions des Sciences de l'agriculture, de l'alimentation et de la nutrition, des Sciences sociales et des Communications, constitue une sorte d'école forestière en plein air. L'équipe de chercheurs a ainsi énormément contribué à la diffusion du concept de l'agroforesterie, technique prometteuse associant étroitement cultures, élevage et foresterie.

La Division des communications a aussi poursuivi en 1987-1988 son appui au développement de l'édition scientifique et technique en Afrique. En collaboration avec l'Agence de coopération culturelle et technique, les responsables de publications scientifiques d'Afrique du Nord ont participé à deux ateliers en édition, à Rabat, au Maroc. Un vaste projet en coopération, permettant de relancer trois périodiques scientifiques, en Côte d'Ivoire, au Sénégal et en Tanzanie, avec l'appui de l'Association canadienne d'études africaines, a aussi été approuvé.

Un autre projet appuyé par la Division permettra à la University of the Philippines à Los Baños de produire cinq modules d'enseignement des techniques de gestion de la recherche. Les modules comprennent des manuels et présentent des cas d'une façon très vivante, sur vidéo-cassette. Eventuellement, les scientifiques de nombreux projets du CRDI devraient bénéficier de ce cours.

Publications

En 1987-1988, la Division a publié 51 monographies, comptes rendus, ouvrages techniques et rapports manuscrits portant sur les nombreux domaines de recherche subventionnés par les divisions de programme du CRDI. Le lecteur trouvera à la page 83 de la section anglaise de ce rapport une liste des publications et des films produits par le CRDI ou découlant directement de recherches subventionnées par le Centre. Les titres des ouvrages sont donnés dans la langue originale de publication. Des catalogues des publications et des films sont fournis sur demande.

Magazines

Au nom du CRDI, la Division administre aussi plusieurs services d'information sur le développement destinés à divers publics, autant à l'étranger qu'au Canada. Une revue trimestrielle, *Le CRDI Explore*, ainsi que des films documentaires, constituent les éléments les plus importants de ces services. Magazine trimestriel publié par le Centre, *Le CRDI Explore* présente les travaux de recherche financés par le Centre de recherches pour le développement international et traite de sujets relatifs à ses domaines d'intervention. Son tirage est d'environ 28 000 exemplaires — en incluant les éditions en français, en anglais et en espagnol — dont plus de 60 % sont diffusées dans les pays en développement, plus de 22 % au Canada et le reste dans d'autres pays industrialisés. *Le CRDI Explore* paraît en janvier, en

Activités des divisions

Communications

6 projets, 0,8 million de dollars

La Division des communications joue un rôle de premier plan dans l'effort de valorisation des résultats issus des projets financés par les autres divisions du CRDL. Une foule de moyens et de méthodes diverses favorisant la diffusion des résultats des recherches, leur adoption et leur utilisation bénéficient d'un soutien. La Division étudie aussi l'ensemble des stratégies et moyens utilisés afin de mieux planifier les activités de valorisation des résultats du CRDL. Une particularité qui distingue la Division des communications tient au rôle important qu'elle joue pour le CRDL au Canada en étant responsable du programme des affaires publiques et d'un début de programme d'éducation au développement.

Par l'intermédiaire des financements accordés à de nombreux groupes du Tiers-Monde, la Division des communications appuie une foule d'expériences innovatrices mises en oeuvre par des artisans des médias électroniques et imprimés, des vulgarisateurs, des éditeurs de publications scientifiques et même de scientifiques prêts à travailler main dans la main avec des spécialistes de la communication.

Au cours de la dernière année, la majorité des projets appuyés par les Communications avaient pour objectif la valorisation des résultats de recherche.

Au Togo, en Afrique de l'Ouest, la deuxième phase d'une recherche sur l'amélioration des installations d'entreposage traditionnelles du maïs consistera surtout en un effort de diffusion des résultats. Dans ce premier projet, la Division est partenaire de la Division des sciences de l'agriculture, de l'alimentation et de la nutrition. Dans un second projet sur les pêches artisanales dans le Sud du Sénégal, les deux divisions précédentes se sont associées à la Division des sciences sociales, cette dernière ayant financé seule la première phase de la recherche.

Un très ambitieux projet, qui devrait faire de l'Institut de recherche sur les pêches en mer jaune, à Qingdao (Chine), un centre de formation en aquaculture pour les pays en développement, réunit trois divisions du CRDL : Sciences de l'agriculture, de l'alimentation et de la nutrition, Bourses et Communications. La Division des communications financera la production de matériel pédagogique écrit et audiovisuel. Toujours en Chine, la Division a accepté de soutenir la diffusion des techniques de plantation du paulownia, un arbre à croissance rapide utilisé comme brise-vent et comme source de bois de chauffage et de construction. Des résultats spectaculaires ont été obtenus en Chine, particulièrement après un financement de la Division des sciences de l'agriculture, de l'alimentation et de la nutrition. Ce projet

scientifiques par 10 000 habitants, alors que la moyenne des pays à économie de marché est de 285. Or, une société n'a pas d'avenir si elle ne peut compter sur un apport constant de connaissances nouvelles créées par ses propres chercheurs. Cette nécessité de compétences scientifiques et techniques autochtones devient encore plus importante depuis que la Commission mondiale sur l'environnement et le développement — ou Commission Brundtland — a démontré l'importance d'inventer une agriculture viable à long terme, plus écologique et moins dépendante des produits chimiques. Une telle agriculture exige un apport continu de nouvelles variétés bien adaptées aux conditions locales. Le recours à la lutte biologique plutôt qu'à la lutte chimique dépend d'une capacité locale d'identification et de multiplication de «bons insectes», car virus, bactéries et insectes nuisibles évoluent constamment. En fait, une agriculture plus respectueuse de l'environnement et plus biologique ne peut exister sans l'apport continu de spécialistes de l'environnement local ; ce type d'agriculture ne s'importe pas.

La nécessité de compétences locales, évidente dans le cas d'une agriculture viable respectueuse de l'environnement, est aussi valable pour le bien-être sanitaire des populations ; les bactéries et les virus qui affectent les humains diffèrent d'un endroit à l'autre et évoluent selon les conditions de leur micro-environnement local. De même, pour l'analyse de l'économie, même si les économies mondiales sont de plus en plus inter-reliées, les habitants de l'Afrique de l'Est, d'Amérique latine et de l'Asie du Sud-Est ont besoin de connaître leur propre contexte socio-économique et d'inventer des stratégies et des politiques à leur mesure.

L'amélioration des compétences scientifiques et techniques crée aussi des conditions meilleures pour le développement des ressources humaines nationales. La qualité de la formation se trouve grandement rehaussée par l'apport de chercheurs de qualité, en commençant par l'enseignement dans les universités et dans les instituts spécialisés.

Enfin, le CRDI soutient avec insistance la coopération Sud-Sud en formation scientifique et technique. En donnant aux chercheurs l'occasion d'apprendre sur le tas, en multipliant les échanges, en favorisant l'émergence de centres d'excellence, en aidant les enseignants-chercheurs à rester à la fine pointe des connaissances et en accordant de nombreuses bourses de formation dans des institutions des pays en développement, les actions du CRDI ont de nombreux effets multiplicateurs, toutes contribuant à l'avancement des plus prometteuses des ressources humaines.

Tous les efforts de développement des individus s'effectue dans le cadre de recherches axées sur des problèmes de tous les jours. De cette façon, tout en se perfectionnant, les personnes soutenues par le CRDI contribuent concrètement à améliorer les conditions de vie de leurs concitoyens.

Au cours de sa dernière année budgétaire, le CRDI a particulièrement insisté sur la coordination de ses programmes afin que les personnes qu'il contribue à former aient, en plus d'une solide formation dans une discipline scientifique particulière, une aptitude à travailler avec des collègues d'autres disciplines ; par exemple, plusieurs groupes de spécialistes de la recherche agricole et aquicole ont reçu une formation en économie et en valorisation des résultats de la recherche. Ainsi, les ressources humaines, bénéficiaires des fonds du CRDI, se perfectionnent, sans oublier que l'objectif est d'améliorer les conditions des plus démunis.

intellectuel, créateur et innovateur qui va de pair avec l'une des qualités humaines les plus précieuses : la conviction de pouvoir redresser le cours des choses et de façonner l'avenir. Revalorisés par leur nouvelle capacité à changer le monde, les milliers de partenaires du CRDI croient de plus en plus en leur propre valeur. D'ailleurs, n'y a-t-il pas étape plus cruciale dans la valorisation des ressources humaines que celle franchie lorsqu'un individu prend conscience de sa valeur. Pour un être humain ou une collectivité, le moment le plus crucial de son développement demeure certainement celui où il ou elle décide d'avoir confiance en soi. Et le CRDI, parce qu'il laisse l'initiative aux chercheurs du Tiers-Monde, est un puissant révélateur de confiance en soi.

En donnant aux cerveaux du Tiers-Monde l'occasion de se mesurer aux défis de la création scientifique et technique, le CRDI ouvre un horizon sans limite au développement des ressources humaines. Par ailleurs, cette effervescence intellectuelle ne s'effectue pas en vase clos. Les scientifiques appuyés par le CRDI s'associent étroitement aux populations vivant les problèmes à résoudre. Les chances de découvrir des solutions réalistes et applicables se trouvent alors grandement augmentées. Parfois, les travaux de recherche constituent même de véritables occasions de transmettre aux pêcheurs, aux ménages et aux exploitants agricoles la méthodologie scientifique elle-même. Par exemple, des villageois participent à la conception, à la réalisation et à l'analyse d'enquêtes sur les besoins sanitaires de leur communauté. Des paysans deviennent les associés des sélectionneurs dans la création de variétés améliorées. Des résidents de bidonvilles travaillent main dans la main avec les sociologues et les urbanistes qui explorent de nouvelles façons d'améliorer leur qualité de vie. Un nombre croissant de travaux de recherche deviennent autant d'occasions de partager la méthodologie scientifique avec des populations parfois analphabètes, belle preuve d'un développement des ressources humaines qui refuse toute limite.

La justesse d'un développement fondé sur la valorisation des ressources humaines est amplement démontrée par les résultats obtenus. Au premier abord, il n'y a peut-être pas beaucoup de différence entre une installation fournie clé en main et une autre construite à partir d'une technologie développée localement : entre une semence importée et une autre créée sur place ; entre un appareil donné et un autre fabriqué par des artisans de la communauté. Mais le temps est un impitoyable révélateur de la différence. La technologie sans racines locales rousse et s'arrête faute de maintenance adéquate et de pièces de rechange. Par contre, la technologie inventée et fabriquée localement, non seulement se maintient, mais elle se transforme, évolue et se perfectionne. Plusieurs projets du CRDI, dans les domaines de la télématique, de l'informatique, de l'amélioration variétale, de l'innovation économique, de la transformation des aliments, du traitement des eaux usées et de l'approvisionnement en eau sont même devenus autant de centres d'excellence. Des experts du Tiers-Monde — sommités mondiales dans leur domaine — y forment des collègues d'autres pays en développement. Quelle plus belle preuve de la valeur de l'investissement dans le perfectionnement des capacités humaines.

Les besoins ne demeurent pas moins immenses. Moins de 3 % de tous les fonds consacrés à la recherche-développement sont dépensés dans les pays en développement. Ces derniers ne comptent que 95 ingénieurs et

Introduction

Au début de cette année le gouvernement canadien a annoncé sa nouvelle stratégie d'aide aux pays en développement. Parmi les points saillants, figure l'engagement du gouvernement à examiner toutes les activités d'aide en fonction de leur contribution à l'accroissement de la capacité des pays récipiendaires à résoudre leurs propres problèmes. En pratique, cela signifie que le développement des compétences locales devient la toute première priorité de l'aide publique au développement du Canada.

Le Centre de recherches pour le développement international (CRDI) applaudit et partage entièrement cette politique du gouvernement canadien. Toute l'action du CRDI se résume d'ailleurs en une audacieuse entreprise d'investissement dans l'une des composantes les plus précieuses du capital humain du Tiers-Monde : les hommes et les femmes qui s'emploient à trouver des solutions originales et pratiques aux problèmes du développement, tout en se faisant partenaires des populations les plus défavorisées. Depuis les 18 années qu'il a été créé par le Parlement du Canada, le CRDI a contribué à la formation de milliers de techniciens et de scientifiques. Certains ont accédé à d'importantes postes de décideurs, d'autres contribuent au jour le jour aux travaux de centaines d'institutions de recherche et une foule d'entre eux ont été décorés pour leur contribution au mieux-être de leurs concitoyens.

La plus belle preuve de l'importance accordée par le CRDI au développement du capital humain est qu'il s'offre lui-même comme champ d'expérience et d'apprentissage. Il réserve en effet une place capitale aux habitants du Tiers-Monde à tous les niveaux de son organisation. Ainsi, son propre fonctionnement quotidien est l'occasion pour de nombreux ressortissants du Tiers-Monde d'apprendre et de se perfectionner en écoutant et conseillant leurs collègues.

Au niveau le plus élevé, le Conseil des gouverneurs du CRDI compte sept représentants d'Afrique, d'Amérique latine, d'Asie et des Caraïbes. Ses six bureaux régionaux, à Bogotà, au Caire, à Dakar, à Nairobi, à New Delhi et à Singapour, fer de lance de sa décentralisation administrative, ont tous pour directeur des gens de chaque région respective. Et parmi les divers niveaux de cadres, aussi bien au siège à Ottawa que dans les bureaux régionaux, l'on compte des dizaines d'experts, de scientifiques et de spécialistes des pays en développement. Nombre d'entre eux, après quelques années de service au CRDI, retournent occuper d'importants postes de

Tous ces travailleurs du CRDI interagissent constamment avec des centaines de chercheurs soucieux de trouver des solutions durables aux problèmes du développement. Ils poussent les meilleurs esprits des régions en développement à aller plus loin et à reculer les prétendues limites aux connaissances et à l'innovation que trop de personnes des pays industrialisés prennent pour immuables. Ils alimentent constamment le bouillonnement

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Rapport annuel 1987-1988

Centre de recherches pour le développement international

Le Centre de recherches pour le développement international (CRDI) est une corporation instituée en 1970 par le Parlement du Canada pour encourager et subventionner des recherches techniques et scientifiques réalisées par les pays moins avancés, pour leur propre bénéfice.

Les domaines d'étude auxquels le CRDI prête une aide professionnelle et financière concernent : l'agriculture, l'entreposage, le traitement et la distribution des vivres ; la foresterie ; les pêches, la zootechnie ; l'énergie ; les maladies tropicales ; l'approvisionnement en eau ; les services de santé ; l'éducation ; la démographie ; l'économie ; les communications ; les politiques urbaines ; les politiques scientifiques et technologiques ; les sciences de la terre et du génie et les systèmes d'information.

Bien que les fonds du CRDI proviennent totalement d'une subvention du gouvernement du Canada, le CRDI est dirigé par un Conseil des gouverneurs international, formé de 21 personnes. Aux termes de sa loi constitutive, le président, le vice-président et neuf gouverneurs doivent être de citoyenneté canadienne ; parmi les dix autres gouverneurs, en fait sept sont des ressortissants de pays en développement.

Les programmes du CRDI aident les pays en développement à se doter des capacités et des institutions scientifiques requises pour résoudre leurs propres problèmes.

Le CRDI met en évidence le rôle du scientifique dans le développement international et encourage les pays du Tiers-Monde à faire appel aux capacités de leur propre communauté scientifique. Les projets de recherche subventionnés par le CRDI sont proposés, élaborés, dirigés et administrés par les chercheurs du Tiers-Monde dans leurs propres pays, en fonction de leurs propres priorités.

Le CRDI aide à la création et au soutien de réseaux de recherche internationaux qui permettent aux pays en développement de profiter mutuellement de leurs travaux, de mettre en commun leur expérience et d'effectuer des recherches visant un même but. Il favorise également la coopération entre les chercheurs des pays en développement et leurs homologues canadiens.

Le CRDI, dont le siège est à Ottawa, a six bureaux régionaux :

- Bogotà, Colombie : Amérique latine et Antilles
- Le Caire, Egypte : Moyen-Orient et Afrique du Nord
- New Delhi, Inde : Asie du Sud
- Nairobi, Kenya : Afrique orientale et australe
- Dakar, Sénégal : Afrique centrale et occidentale
- Singapour : Asie du Sud-Est, de l'Est et pays du Pacifique

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Siège social du CRDI



Chairman of the Board
Président du Conseil

15 juillet 1988

Le très hon. Joe Clark, C.P., Député
Secrétaire d'Etat aux Affaires extérieures
Ministère des Affaires extérieures
Ottawa, Ontario

Monsieur le Ministre,

Conformément aux dispositions de
l'article 22 de la loi constitutive du Centre de
recherches pour le développement international,
j'ai l'honneur de vous faire parvenir, sous ce
pli, le Rapport annuel du Centre de recherches
pour le développement international pour
l'exercice financier ayant pris fin le 31 mars
1988 comprenant les états financiers du Centre
et le rapport du Vérificateur général.

Je vous prie d'agréer, Monsieur le
Ministre, l'assurance de ma haute considération.

Janet M. Wardlaw
Janet M. Wardlaw

La carte de la page couverture a été établie d'après la projection de Peters et non celle de Mercator à laquelle nous sommes plus habitués. La projection de Peters innove de plusieurs façons : représentation exacte des superficies à la surface de la terre, y compris les pôles ; situation de l'équateur au milieu de la projection et déformation des contours limitée aux zones intertropicales et polaires. Cette représentation graphique de la Terre permet, croit-on, une meilleure comparaison des régions les plus peuplées du globe.

Arno Peters, professeur à l'Université de Brême, nous a aimablement autorisés à utiliser cette carte.

RAPPORT ANNUEL CRDI 1987 / 1988

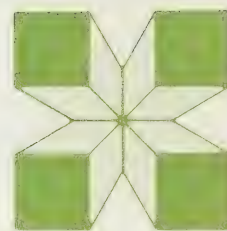


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Head Office

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Regional Office for South Asia

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Regional Office for Eastern and Southern Africa

IDRC, PO Box 62084, Nairobi, Kenya

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Regional Office for Southeast and East Asia

IDRC, Tanglin PO Box 101, Singapore, Republic of Singapore

Please direct requests for information about IDRC and its activities to the IDRC office in your region.



INTERNATIONAL DEVELOPMENT RESEARCH CENTRE

CENTRE DE RECHERCHES POUR LE DEVELOPPEMENT INTERNATIONAL

Chairman of the Board
Président du Conseil

July 15, 1989

The Rt. Hon. Joe Clark, P.C., M.P.
Secretary of State for External Affairs
Lester B. Pearson Building
125 Sussex Drive
Ottawa, Ontario
K1A 0G2

Dear Minister:

In accordance with Section 22 of the International Development Research Centre Act, I have the honour to transmit herewith the Annual Report of the International Development Research Centre for the fiscal year ending March 31, 1989 which includes the financial statements of the Centre and the Auditor General's report thereon.

Yours sincerely,

Janet M. Wardlaw

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PO Box 8500, Ottawa, Ontario, Canada K1G 3H9

IDRC, Ottawa CA

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Annual Report 1988--1989

International Development Research Centre

The International Development Research Centre (IDRC) is a public corporation created by the Parliament of Canada in 1970 to stimulate and support scientific and technical research by developing countries for their own benefit.

The fields of investigation to which IDRC gives its financial and professional support include: farming; food storage, processing, and distribution; nutrition; forestry; fisheries; animal sciences; environment; energy; tropical diseases; water supplies; health services; education; population studies; economics; communications; urban policies; issues relating to women in development; earth and engineering sciences; and information sciences.

Although IDRC is funded by the Canadian Parliament, its operations are guided by an international 21-member Board of Governors. Under the IDRC Act, the chairman, vice-chairman, and 9 other governors must be Canadian citizens; in practice, 7 of the remaining 10 governors are from developing countries.

The programs that the Centre supports help developing countries build the scientific competence of their institutions and researchers so that these countries can work to solve their own problems. Research projects supported by the Centre are, therefore, identified, designed, conducted, and managed by developing country researchers in their own countries, to meet their own priorities.

IDRC helps to create and supports international networks through which developing countries can learn from each other, share common experiences, and conduct similarly designed studies in areas of mutual concern. The Centre also promotes cooperation between researchers in developing countries and their counterparts in Canada.

IDRC has its headquarters in Ottawa, with regional offices in

- Bogotá, Colombia (Latin America and the Caribbean);
- Cairo, Egypt (Middle East and North Africa);
- New Delhi, India (South Asia);
- Nairobi, Kenya (Eastern and Southern Africa);
- Dakar, Senegal (West and Central Africa); and
- Singapore (Southeast Asia, East Asia, and the Pacific).

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Introduction

The terms “East–West” and “North–South” entered the vocabulary several decades ago. They encapsulated in simple, vivid fashion the complex international relationships of the period after World War II. Not surprisingly, they have done more: the two terms have shaped attitudes to such an extent that they now threaten the very understanding they were intended to encourage. What began as simplification has become simplistic.

World systems and world processes are now evolving with blinding speed. “East–West” and “North–South” threaten to lock us into mind-sets that are not just dated, but are dangerous. The East–West axis reflects increasingly fresh ideas and bold acts, yet sound management of the relationship is threatened by attitudes conditioned in an earlier, different era — words memorized 40 years ago shape today’s images.

The North–South axis illustrates even more graphically such dated, dangerous impressions. The earlier concepts of developing countries in the South being dependent for their well-being on the industrialized states of the North continue to be held firmly by too many governments and publics at a time when the reverse may be more accurate. A combination of population pressures, deteriorating ecosystems, financial transfers, and political instability in the South has placed the North at risk. No longer can events in the South be regarded as marginal to the fate of the North. Tragically, however, that is exactly how they are all-too-often viewed.

The interests and the future of Canadians are now being determined by people in distant countries. Canada’s ability to mold events unfolding there is not limitless, but neither is it incidental. Our willingness to act, however, depends on our awareness of what is actually happening, not on the arrogant assumptions encapsulated in the term “North–South.”

It is from the South that much of the threat to the wholesomeness of our atmosphere comes. As we in the North poison our air with increasingly large emissions of toxic fumes, we have depended on the tropical rain forests of the South as purifiers, as manufacturers of the oxygen we require. We have also assumed that the countries of the South would not act in the same irresponsible way that we have; that they would be selfless enough not to increase the numbers of smoke-stack industries. Not surprisingly, both of those assumptions are unsustainable. Burgeoning populations in the South

are encroaching increasingly on forested lands, destroying the trees in a desperate endeavour to grow needed food. Governments beset by impoverished populations endeavour to provide employment through low-cost initiatives, many of which depend on the oxidation of readily available fuels that are serious polluters.

It is from the South that much of the cash flow on which our financial institutions rely comes; it is to the South that Canada exports large quantities of value-added manufactured goods. The developing countries, in aggregate, import more Canadian goods than do either Japan or all the members of the European Economic Community combined. Should economic circumstances in the developing countries continue to decline, our economy is placed increasingly at risk. The North South Institute has calculated that Canada lost \$24 billion of exports and 130 000 jobs in the past 7 years because of the downturn in the South. The assumption that debt servicing from South to North can continue under present circumstances is simply naive. In 1988, the developing countries, worldwide, transferred to the North US\$43 billion more than they received — a perverse, unsustainable transfer of wealth from the poorest to the richest that has contributed to civil strife and political instability in many developing countries.

It is in the South that desperate economic circumstances breed social instability. Despair is the fodder of religious fundamentalism, of populist political parties, and of criminal activity. Desperately poor people pursue any opportunity for survival — illegal entry into countries (such as Canada) that promise hope, narcotics cultivation to earn cash income, and degrading or criminal conduct of any kind that offers some economic return. In these circumstances, governments seek to retain power and the semblance of order through often-draconian means — human rights are denied, the seeds of terrorism are sown, and regional conflicts flare as governments divert attention from domestic failures.

The planet Earth and its inhabitants cannot sustain indefinitely patterns of conduct that have led to a world population of 5.2 billion (a figure twice what it was only 40 years ago), conduct that has placed 1 billion persons in circumstances where their diet is inadequate to permit them to work, is destroying arable land at the rate of 1 hectare every 14 seconds, has led to economies that are reducing the standard of living of persons in most developing countries, has encouraged arms transfers to

governments ill-able to afford them, and has doomed future generations of hundreds of millions of young persons to lives without education, without hope, and without societal or family discipline.

That South is not able indefinitely to pay its debts, to buy our goods, to protect our environment, to respect our values, and to refrain from destabilizing our world. That South is now changing our world with a momentum and magnitude more powerful than any social movement since the 17th century. Yet the North pretends not to notice or, if noticing, fails to act adequately. We continue to invest heavily in a perceived East–West axis that is changing dramatically. We continue to ignore a North–South axis even as it diminishes our welfare and threatens our security.

Human resources, properly trained, and effective technologies, properly deployed, have combined over time to give the countries of the North the highest standards of living in the history of humanity. The same formula, thoughtfully designed and sensitively applied, can provide the peoples of the South with the means to design their own future and contribute to their own well-being. In the North, there is no more demonstrable cause and effect relationship than the level of scientific research on the one hand and the standard of living on the other. The same is true in the South, as is evident in the near miraculous achievements of some Asian economies.

Almost two decades ago, Canada took a world-wide initiative (since followed by several other governments) to assist the developing countries to enhance their own scientific competence and to identify and solve their own development problems. That initiative was called the International Development Research Centre (IDRC). In the past 19 years, its international Board has used the Centre's parliamentary grant to make science work in increased food production, better health, higher quality education, improved sanitary housing, more workable social policies, and more sustainable economic planning and adjustment.

The amounts involved have been modest — less than 4% of Canada's annual budget for overseas development assistance — but the results have been extraordinary and the contribution to Canada's reputation invaluable. Success stories can be chosen from many of the 100 countries where Centre-supported projects have led to the solution of local problems; where continued efforts, over time, are making significant contributions to human

dignity, social well-being, and economic advancement as has been the case in the North.

Sigma Xi, the international society to encourage scientific research, was so impressed with this form of development assistance that it selected IDRC last year as the first recipient of its 21st Century Award as the organization anywhere in the world that was “best preparing society for the next century.” And such is IDRC's reputation that it was selected to participate in a study conducted by Canada's Auditor General on the attributes of well-performing organizations. This “well-performing” rating by the Auditor General amounts to receiving a good-management Oscar from the most demanding of judges.

Within the limits of the funds available to it, IDRC will continue to pursue its mission to use science to promote the indigenously determined social and economic advancement of the developing regions of the world, with particular focus on the poorest people of those regions. It does so from a Canadian perspective, aware that Canadians depend on export markets, depend on a wholesome environment, and depend on peace. Aware too, that as a decent society, our sense of self respect depends on human dignity elsewhere.

Divisional summaries

Agriculture, Food and Nutrition Sciences

116 projects, \$29.8 million

The goal of the Agriculture, Food and Nutrition Sciences Division (AFNS) is to increase the individual's access to food and other basic necessities. Such an objective involves strategies that go far beyond simple increases in food production. These strategies aim at an equitable distribution of the benefits of agricultural activities and at securing the purchasing power of the rural and urban poor. Increasingly, the need is to create jobs within the system of producing and using renewable natural resources.

IDRC has recently reassessed its nutrition strategy and is increasing its support in this area. A Centre-wide Nutrition Unit was created in January 1989 within AFNS to coordinate and integrate the nutrition-related work of all divisions through an interdivisional advisory committee on nutrition.

The Division's concern with the ecological impact of agriculture production systems and the need for promoting sustainable practices has also led it to increased programing in this vital area.

The structure of AFNS was altered somewhat this year with the splitting of the Crop and Animal Production Systems Program into two — Crop Production Systems and Animal Production Systems.

Nutrition unit

The overall mission of the new Nutrition Unit is to contribute to the improvement of community nutrition and, in particular, the nutritional status of the poor. In pursuit of this mission, the Unit supports research that seeks to promote:

- The development and implementation of methodologies for assessing the broad causes of community nutrition problems;
- The formulation of national policies and action programs for nutritional improvement; and
- Integrated projects in nutrition, innovative methodologies, and the dissemination of new and relevant information from related disciplines.

Initially, the Unit has focused on South Asia and Africa, in view of the extreme nutritional

problems in these regions, but activities in Latin America and Southeast Asia are rapidly evolving.

Activities that have been initiated in South Asia include the formation of an advisory group of regional nutrition experts; research to determine the implications of different farming systems for nutritional status; research and development to improve food utilization and generate income in semi-arid regions in India; studies to promote nutritional improvement in young women and infants; and community research to test and refine methodologies for identifying nutritional problems and causes. The latter activity has resulted in an IDRC publication that will serve as a guideline for the rapid assessment of nutritional problems and the design of interventions by community nutrition researchers.

The severe and extensive nutritional problems in the African region demand urgent attention. Sustained nutritional improvement in the region will depend on developing the agricultural base and decelerating environmental degradation.

Currently, intersectoral projects in community nutrition are under development in Bénin and Nigeria. It is expected that a network of integrated nutrition projects for West Africa will result from these activities. In conjunction with the World Health Organization, IDRC is conducting a series of workshops to identify problems for nutrition researchers in West and East Africa. There is increasing dialogue with the United Nations Children's Fund on nutrition issues in Africa, particularly in relation to child survival and appropriate rural and development policies.

Animal production systems

The objective of the Animal Production Systems Program is to help the poor in developing countries by increasing the supply and availability of animal products. This is accomplished through support of research aimed at increasing animal production and productivity on small-scale farms in three subprogram areas: production systems, feeding systems, and systems components. Through improvements in these areas, income and access to food may be increased.

In developing countries, consumption of protein, especially of high-quality protein, is very low. Most of the protein consumed is of plant origin. The production of high-quality animal protein (including milk, eggs, meat, and offal) is limited by various factors that result in prices that

are usually beyond the means of the general populace.

Milk and milk products are important components of the diet, particularly for children. Most tropical countries do not produce enough and, to meet the demand, considerable quantities are imported. In Latin America alone, it is estimated that the annual expenditures on milk and milk products imports exceed US\$500 million.

The Centre supports many projects that aim to improve domestic production of this key commodity. Milk production systems projects were renewed in Chile and Guyana and a project on livestock production systems in Burundi was also renewed. Promising technologies in pasture production are being developed in these projects, with the potential to greatly increase milk production and the productivity of small-scale farms.

Although progress has been made with the feeding, management, and health of livestock, some scientists would like to see an improvement of the breeds themselves. A new project in Venezuela aims at developing methodology for on-farm evaluation and genetic improvement of dual-purpose cattle. This is a new direction for the Division and, once developed, the methodology will be applied in other projects in Latin America, as well as in Africa and Asia.

Small ruminant production continues to be an important subject of Centre support. The ability of sheep and goats to produce in harsh environments around the world, and their characteristic prolificacy, make them highly suitable for small-scale farmers. A new project in Malaysia, which integrates the breeding of sheep and goats within oil palm plantations, is being funded. Another project addressing the improvement of goat production by small-scale farmers has been renewed. These farmers, largely neglected by research and development institutions in the region, are among the poorest in the rural sector.

Animal feeding systems continues to be an area of major program priority. In Latin America, a large proportion of the peasant population inhabit the highlands of the Andes. They practice farming systems where animal production is based on native grasslands of low productivity. Considerable improvements can be made by introducing better pastures and more efficient techniques for managing rangelands. Toward this end, a regional network, based in Chile, was approved. Further afield, pasture projects in several countries in Africa and in Ecuador were renewed. The

beneficial effect of improved pastures on animals and seed production shown by these projects may mean an expansion of these kinds of activities to other regions.

Crop production systems

The goal of the Crop Production Systems Program is to achieve stable and sustainable agricultural productivity while maintaining or enhancing environmental quality. Component and systems research, often in collaboration with other IDRC programs and divisions, underlies the strategy of the Crop Production Systems Program staff. Emphasis is placed on applied, multi-disciplinary, on-farm participatory research activities; however, more-basic research endeavours (in biotechnology, for example) are receiving increasing attention. The need to establish and maintain strong linkages among national programs, international and regional centres, and other relevant research and development institutions (e.g., nongovernmental organizations) is recognized and promoted.

A major undertaking of the Program is support for the Oilcrops Network in Asia and Africa. The Network's research activities have helped to develop higher yielding, disease-resistant oilcrops. Also, nations with weaker national programs are being helped by the more advanced ones through training courses, visits, and the exchange of information. Recently, China has developed a keen interest in the Oilcrops Network and Chinese delegates at several meetings have offered to exchange knowledge and advanced germ plasm on a reciprocal basis.

Support is also being provided for the Alley Farming Network in Africa. This network will contribute to the development of sustainable production systems (involving crop and animal production improvements) for the humid and semi-humid tropics. This project involves the collaborative efforts of the Forestry and Crop Production Systems programs, something that is on the increase, and is jointly funded by the Canadian International Development Agency and IDRC.

Sustainability issues, receiving greater emphasis in Southeast Asia, are highlighted by two projects. The first, at the University of the Philippines, aims to create a farmer-scientist partnership to collect, maintain, exchange, screen, and breed suitable local rice cultivars. The other is the *Sustainable Agriculture Newsletter* (Malaysia), an ongoing publication that addresses the increasing number of individuals and organizations interested in this topic. This newsletter,

cosponsored by IDRC and CUSO (formerly Canadian University Service Overseas), has now published four issues.

A subprogram involves research on annual crops, perennial crops, cropping systems, and integrated pest management. New initiatives funded during the past year in annual crops included one on vegetable seed production in Thailand. It recognizes the nutritional importance of vegetables, as well as their large potential for generating income and employment on small-scale farms. Budgetary allocations for vegetable research are likely to be increased in the future. In Africa, an exciting attempt is being made to use new technological tools to help breeders control viral diseases of major food crops. This research into monoclonal antibodies is in collaboration with the International Institute of Tropical Agriculture in Nigeria and Agriculture Canada.

Research into perennial crops has concentrated on plantains and bananas. A project to assist the Ugandan government to establish a national banana research program has been funded in collaboration with the Rockefeller Foundation.

In pest management, a collaborative research project was undertaken to control lepidopteran pests through use of *Bacillus thuringiensis*: a promising research avenue that will continue to be explored.

Forestry

The objective of the Forestry Program is to increase the supply and availability of forest products for the benefit of the poor in developing countries. This objective is being accomplished by support for applied research aimed at promoting community or social forestry programs, developing systems in which trees and woody plants contribute to environmentally sound and sustainable food production, and enhancing incomes derived from forest products.

These priorities have been defined in the context of the Division's stated goal of improving access to food. Clearly, the Forestry Program can seldom provide food directly; however, its support of research into integrated production systems and provision of energy does contribute to this overall divisional objective. Equally, in its support for other areas of research, for example, on bamboo and rattan, the program is promoting increased income generation or purchasing power.

Some initiatives developed during the year deserve special mention. Conserving and evaluating natural genetic resources have received increased

emphasis with support for projects in all regions. These include Congo and Mali (native species), Malaysia and Papua New Guinea (rattan), Argentina, Costa Rica, and Peru (*Prosopis* and *Inga* species). In addition, second-phase support has been provided for the successful Zimbabwean Regional Seed Centre.

Support for agroforestry has continued to be the priority area, with just over 50% of the Program's allocation being devoted to this field. Again, support has been provided for research in all regions. Notable examples include a silvipasture project in India that aims at improving the productivity and sustainability of the central wastelands by introducing forage and nitrogen-fixing trees. A collaborative project in Kenya links local researchers with the University of Toronto; its objective is to develop soil-conservation techniques that account for traditional land-use practices and socioeconomic factors.

Finally, the Program's increased activity in the Middle East, which had previously received considerably less support than other regions, should be mentioned. During the year, major projects have been supported on tree culture in Egypt and shelterbelts in Tunisia. It is planned that the program in the region will be further strengthened in the coming year.

Fisheries

The Fisheries Program's two main objectives are to increase the aquatic-based food supply for local populations and to improve the livelihood of rural and coastal communities involved in artisanal fisheries. The Program is organized into two subprograms: aquaculture (marine and freshwater) and artisanal fisheries. Aquaculture promotes research on the scientific and technical requirements of production systems; its major thrust is in Asia and, to a smaller extent, in Africa. Artisanal fisheries promotes the integrated development of coastal communities and its major thrust is in Latin America.

During the year, the Fisheries Program continued to emphasize an integrated approach to fish production by coastal and rural populations, with a special focus on fish as a source of food for local consumption. The need for this approach is emphasized by the case of Latin America, where fish consumption remains low, averaging 5 kg/person per year, even though fish production in the region contributes over 15% of global production. A major challenge to the Program is to promote increased domestic use of the fish

produced; thereby improving the nutritional level of the local population.

During 1988–1989, the Fisheries Program developed seven projects in artisanal fisheries that aim at increasing fish production primarily for local consumption. *Artisanal Fisheries Network (Chile)*, *Artisanal Fisheries (Colombia)*, and *Artisanal Fisheries Development (Peru)* are three integrated projects in which applied research on resources availability, mariculture, transport of the catch, processing technology, and the improvement of socioeconomic conditions of coastal communities are supported through a multidisciplinary approach involving other IDRC divisions and programs.

Three other projects — in Brazil on tuna, Chile on marine farms, and Uganda on lake productivity — aim at increasing the output of fish products for local consumption. A further project in Latin America, jointly funded with the Communications Division, will test and evaluate the use of audiovisual material in the transfer of fish processing and mariculture technology to coastal communities.

In Asia, the development of aquaculture technology, particularly aspects of fish nutrition, health, and genetics, continues as the main thrust.

Post-production systems

The broad objectives of the Post-Production Systems Program are to make more and better-quality food available to the rural and urban poor, and to increase employment and income opportunities through small-scale enterprises that process and market agricultural commodities. To achieve these objectives, the Program supports research on many aspects of the postproduction systems for important food commodities. It covers and integrates a wide range of disciplines that include marketing and economics, engineering, entomology, food science and technology, biochemistry, and nutrition.

The Program comprises three subprograms: food processing, utilization, and nutrition; food handling, storage, and drying; and equipment design, adaptation, and testing. Activities in the third subprogram focus on technical requirements for effective and efficient operation of the first two. Studies to define problems and research are encouraged before support is launched into larger projects for technology development. These studies are usually interdisciplinary and are frequently funded in cooperation with other programs.

One such project in West Africa (jointly funded with the Agricultural Economics Program)

analyzes the socioeconomic benefits of new technology in the region. By accounting for the potential socioeconomic impact, appropriate technological choices can be made. Based at the African Regional Centre for Technology in Senegal, it also encourages young social science and technology researchers to develop this capability in their own institutions.

Two projects dealing with Andean foods and food processing are worthy of note. They involve three regional universities in southern Peru and the University of Alberta in Canada. The focus is on improving food quantity and nutrition, and increasing income in rural communities and is linked to earlier work on Andean crop production systems.

In Africa, a major initiative with the Agricultural Economics Program was the development and support of a series of in-depth studies on the production and processing system for edible vegetable oil in Kenya. Carried out by Egerton College in Kenya, this study has identified several potentially important research topics on technology, economics, and policy that are to be further developed.

Agricultural economics

The Agricultural Economics Program seeks to improve the ways in which economic issues are considered when designing and introducing new technology. By judging the potential socioeconomic effects, a sounder decision can be made as to what constitutes the appropriate technology for a given region. In particular, the Program has directed its research support to increasing the efficiency of production, distribution, and processing of food. In collaboration with other programs, there has been an attempt to focus research on the foods used by poorer groups. Furthermore, the production systems that potentially have the greatest income and employment benefits have been emphasized.

Improving the incorporation of economic considerations into technology research and development can be achieved through several means — directed research, education, strategic placement of economists, and collaborative projects with other programs and divisions.

In the first category, several methodological procedures in farming systems research are being tested in Chile. Researchers hope to increase farm income through the design and testing of improved technologies geared to cope with the conditions faced by peasant farmers.

The education approach is well illustrated by a project that brings together researchers affiliated

with the Asian Fisheries–Social Sciences Research Network with faculty from the Institute of Fisheries Analysis at Simon Fraser University in Canada. The objective is to develop a strong core of Asian fisheries economists. High-level expertise in this field is scarce world wide and is greatly needed in Southeast Asia where serious problems in capture fisheries affect or threaten the livelihood of millions of people.

Support for a forestry economics advisor, working through a Centre-supported forestry research network in South and Southeast Asia, is one example of the placement strategy.

Lastly, in terms of collaborative efforts, the innovative methodology for the study of the vegetable oil–protein system in Kenya (previously mentioned in the Post-Production Systems section) involves a high level of interaction between various universities, ministries, and private organizations. It has proven very successful. The overall objective is to satisfy the increasing need for oil for human consumption and protein for animal feed — all in a way that is economically and technically feasible for Kenya.

Communications 9 projects, \$1.3 million

During the fiscal year 1988–1989, the Communications Division approved an unprecedented number of projects. Most of them supported the dissemination of the ever-increasing quantity of useful research results originating from maturing IDRC projects. This major thrust in developing countries was happening while the Division maintained its traditional activities in translation, dissemination, and production of print and audiovisual materials for its Canadian and international audiences.

A national survey of Canadians conducted for the Communications Division confirmed that Canadians believe that information on the realities of the developing world is important. Canadians want to know where research is contributing to development, and where long-term solutions to major issues may lie. This study has contributed to a modification of the Public Affairs Program in the Division, particularly those aspects to improve the Centre's capacity in sharing its rich resources of experience and knowledge. The new public affairs strategy will be aimed at better informing several key audiences of the achievements made possible in the Third World through IDRC funding.

With the projects it supports in developing countries, the Communications Division seeks both

short- and long-term goals. In the first, the objective is to disseminate and promote the use of specific research results; in the long term, it hopes to contribute to the body of knowledge necessary for the successful adoption of new policies and technologies. To pursue these goals, the Division adopted, last year, a three-pronged approach. The first set of activities is collecting and disseminating all concrete research results. The second component is to study ways that communities can become involved in research activities from the design phase of the projects to the analysis and implementation of the results. Research on communication systems and technologies is covered in the third component.

A large number of IDRC-funded research projects have now reached a stage where there is a need to disseminate their results. Thus, particularly in Asia, the Communications Division is very active when the challenge becomes a marketing one. A case in point is a project at the National University of Singapore that supports the production and testing of manuals, posters, flyers, and videos to promote a new instrumentation package run by microcomputers. This package, which can be programed for a variety of uses, will be marketed to professors, researchers, and private sector engineers and technicians. The system has been introduced by the staff of the National University of Singapore in cooperation with Scada Ltd of Toronto.

For centuries and even millennia, bamboo has been an extremely useful and versatile commodity in China. Several IDRC-supported projects aim at increasing the present annual production of 3 million tonnes of stems to 11 million by the end of the century. The Division approved a project that will assist the Subtropical Forestry Research Institute in Fuyang to design a communications strategy for the newly developed bamboo varieties and production technologies. It will be one of the first times that a survey of existing practices and beliefs about bamboo cultivation is carried out before a technological package is implemented.

In the Philippines, the Capiz Development Foundation's efforts to disseminate a ferrocement reservoir technology, needed to catch and store rainwater, will be supported by IDRC's Communications and Health Sciences divisions and the Canadian International Development Agency. This particular reservoir, which can be built in village communities using local resources, was developed through a previous IDRC project.

The Division also partners three projects with the Agriculture, Food and Nutrition Sciences

Division. The first, at the request of scientists at the Universidad Católica de Chile, will videotape demonstrations of improved fishing techniques so they can be taught in coastal communities. The second involves five IDRC divisions that have teamed up to make Visayas State College of Agriculture in the Philippines the leading research institution on root crops (sweet potato, cassava, and yam) in Southeast Asia. Long neglected, root crops are vital to many poor farmers. The third project, which is also supported by IDRC's Office of Planning and Evaluation, is an analysis of nine previously funded projects to determine how the new varieties of seeds they have produced have been marketed. This study is expected to indicate the basic elements of a successful seed marketing strategy needed to transmit these improved varieties to farmers.

Because the Centre's objective is to fund the kind of research that is truly connected to the problems of underprivileged communities, it is of the utmost importance that their needs be clearly identified. Toward this end, the Communications and Information Sciences divisions have responded to a request from the International Institute for Rural Reconstruction, in the Philippines, to evaluate different strategies designed to involve rural communities in identifying and eventually solving their problems. These same divisions are also supporting a joint project of the Caribbean Industrial Research Institute in Trinidad and Tobago and the Centre de recherche industrielle du Québec, which aims at implementing a comprehensive program to provide small- and medium-sized Caribbean industries with the technological and marketing information they need.

Publications

In 1988–1989, the Communications Division published 66 monographs, proceedings, technical studies, and manuscript reports covering numerous areas of research that receive support from IDRC's other divisions. These are listed on page 68 together with other publications resulting from Centre-funded research. A catalogue of IDRC's publications is available on request.

Magazines

The Division also administers, on behalf of the Centre, a number of development information services for a variety of audiences both abroad and in Canada. The Centre's quarterly magazine, *The IDRC Reports*, is an important element in these services. The magazine contains articles on research funded by the Centre and on subjects

related to its work. The print run is 28 000 for the English, French (*Le CRDI Explore*), and Spanish (*El CIID Informa*) versions, with 64% going to the developing countries, about 20% within Canada, and the remainder to other industrialized nations. *The IDRC Reports* is published in January, April, July, and October.

Audiovisual media

Last year, two videos were produced. "Forestry in Botswana" is a 15-minute documentary that details the efforts of the Forestry Association of Botswana in replanting trees throughout the country. "The Dobby Mechanism" is a 15-minute video about a device created by Pakistani inventor, Wasey Omar, that can be attached to power looms. This device can be produced locally and installed easily and will significantly increase the speed and efficiency of looms in the cloth-making industry.

Both videos are available in U-matic, VHS, and Betamax formats; and on NTSC, PAL, and SECAM signal systems. A catalogue of IDRC's films and videos is available on request.

Earth and Engineering Sciences 36 projects, \$9.4 million

This is the 2nd year that the Earth and Engineering Sciences Division has had this name: formerly it was the Cooperative Programs Division. The Division has three main objectives: to develop the scientific and technical research capacity of participating Third World institutions, to create lines of communication and exchange between Canadian scientists and those in developing countries, and to encourage Canadian research groups to take an interest in the increasingly numerous and diverse problems that impede development in the Third World.

Earth sciences

The Division's first program of specialization, established in 1983, is Earth Sciences. It comprises three subprograms: hydrogeology and hydrology, geotechnics, and a small sector on mining that includes agrogeology. The first two subprograms use engineering principles to deal with environmental problems of a geological nature: earthquakes and volcanos, soil erosion and slope instability, and water supply and potability. The third subprogram funds research that looks at developing more efficient ways of extracting and processing local natural resources.

Technology for local enterprises

The Technology for Local Enterprises Program is now in its 4th year of operation and focuses, at present, on three activities: metal and light engineering, textiles and leather, and industrial chemicals. The Program's primary goal is to promote the use of locally available raw materials and resources, as well as upgrading traditional production techniques that are labour intensive.

Building industry, materials, and technologies

The Building Industry, Materials, and Technologies Program was launched in 1987 and deals with the complex problem of shelter for the homeless. The Program concentrates on ways of creating acceptable and affordable shelter for the poor in developing countries, while stressing community participation and self-help construction. In particular, the research focuses on the development of small- and medium-scale industries to produce local building materials and to use them to construct low-cost houses.

Program directions

In 1988–1989, the Division funded several projects that reflect its new thrust.

One project, under the hydrogeology and hydrology subprogram, is a regional network on urban hydrogeology that was started in Latin America. The network aims to maximize the impact of research results by an increased sharing of information. Members include institutions in Argentina, Bolivia, Brazil, Mexico, Nicaragua, and Uruguay. The network's four new projects in La Plata (Argentina), Cochabamba (Bolivia), São Paulo (Brazil), and Managua (Nicaragua) focus on securing the water supply of these cities. Several institutions are involved in the network including the Universidade de São Paulo in Brazil, the Instituto de Geofísica of the Universidad Nacional Autónoma de México, and the University of Waterloo in Canada.

In Africa, hydrogeology projects show a great degree of diversity. The Université nationale de Côte d'Ivoire aims at a better evaluation of underground water resources in the Marahoué Basin. This geological and hydrogeological study will benefit from remote-sensing data and from a space referential information system developed by the University of Sherbrooke in Canada. Two other projects, directed by the Université de Dakar in Senegal, are looking at the silting of wells and soil erosion. In Mali, a project carried out by the École

nationale d'ingénieurs, in collaboration with the Institut national de la recherche scientifique du Québec, seeks a better understanding of underground water contamination in the capital, Bamako.

In a very different kind of environment, promising and in many respects fruitful research is being done by a major study of the melting behaviour of snow and ice in the northern mountains of Pakistan. This project, started in 1983, has laid the groundwork for an important second phase that will spread over 5 years and cost more than \$4 million. It will be entirely financed by the Canadian International Development Agency and involve a partnership between British Columbia Hydro International Ltd and Pakistan's Water and Development Authority. Upon completion, Pakistan will be able to rely on sophisticated modern equipment and a team of highly qualified personnel to make use of the waters in the great reservoirs of the Indus River hydrographic basin.

Under the geotechnics subprogram, research activities include the production of an overall master plan for Conakry, the capital of Guinea in West Africa. It will use the results from a geotechnical survey done in collaboration with Laval University in Canada. In China, projects are underway to study stability criteria for dams and to define appropriate standards for constructing safe buildings in seismically active regions. The Canadian partners in these endeavours are the University of Alberta, the University of British Columbia, and the National Research Council of Canada.

Agrogeology, a young science that marries agronomy and geology, is the common denominator in three research activities in Colombia and Ethiopia. Scientists in Colombia are looking for simple, efficient ways to transform natural phosphatic rocks into phosphate fertilizer. This agrogeological project is an initiative of Fosfacol, a small private sector company that specializes in extracting and processing phosphates. In Ethiopia, one group of scientists is trying to produce fertilizer starting with igneous phosphates, and another group is evaluating how rock mulch can increase crop yields. Both these initiatives are benefiting from collaboration with Guelph University in Canada and are expected to create job opportunities in the host nation.

Miners, employed in small-scale operations, will benefit from the approval of a grant to support research on prospecting for precious and semiprecious gems in Sri Lanka. Researchers at Laurentian University in Sudbury, Canada, and the

Institute of Fundamental Studies in Kandy, Sri Lanka, hope to develop more scientific, simpler, and efficient methods for finding new gem deposits.

The Technology for Local Enterprises Program has funded two networks in Latin America in the past year. The first one will ensure that six current projects dealing with foundry technology are better coordinated. The other network will perform similar functions in the field of chemical technology. In the foundry industry, a project undertaken by the Small Industry Development Organization in Turkey will establish a Capacity Utilization and Technology Unit. This Unit will provide technical advice to improve the quality of the finished product, to guarantee its quality to clients, and to ensure its self-financing in the process. In Peru, a method will be developed by researchers, in collaboration with Simon Fraser University in Canada, to extract the tannins from the fruit of tara trees. This activity should create numerous jobs in the chemical industry as well as provide a stable source of income for the peasants. In Sri Lanka, researchers from the Computer and Information Technology Council, in collaboration with the National University of Singapore and Scada, a Canadian company, are working on a computer-based system that will facilitate the drying of tea leaves at a reasonable cost; thus increasing the returns to small-scale tea growers.

Finally, an example of the Building Industry, Materials, and Technologies Program is the joint undertaking of the Department of Geological Survey and Mines in Uganda and the University of Toronto in Canada to use locally available pozzolans, a cement substitute, in the design and construction of low-cost houses.

Fellowships and Awards **26 projects, \$4.1 million**

The Fellowships and Awards Division is an active partner with the Centre's other divisions in training and upgrading the qualifications of administrators of research institutions, research managers, and researchers themselves. The Division's various programs are designed to respond to the training needs identified by specialists in the other divisions, both in Ottawa and in the regional offices.

The main objective of the Centre's support for training is to increase the research capacity of research institutions in the Third World. The Division tries to meet this objective by offering various categories of awards, which vary in nature and number according to changing needs as

perceived by the Centre. The program focuses principally on individuals from the least-developed countries, with the greater part of the Division's budget spent on individual training awards, which emphasize professional upgrading rather than basic training. Training takes place in centres of excellence located, in order of priority, locally, regionally, in Canada, or in another developed country; where training takes place outside the country of origin, the Division's awards are subject to stringent conditions, meaning that the IDRC-award holder is expected to return home at the end of tenure.

The Division's activities focus on five programs: Training for Project Development; Training for Program Development; Training for Institutional Development; Specialized Training; and Training for Careers in Development — Canada.

Training for project, program, and institutional development

The first three elements of the Division's program framework recognize a gradual shift in emphasis that places priority on strengthening indigenous Third World institutions. In this way, the Division has provided significant support for postgraduate education in eastern and southern Africa. It continues to provide support and encourages attempts at strengthening graduate education, as is the case with the University of the West Indies in the Caribbean, the Pontificia Universidad Javeriana in Bogotá, and the Human Resource Network in Latin America, which focuses on in-depth reviews of graduate-degree training in the region.

There is continuous collaboration with other divisions; especially on projects that are more research oriented. This collaboration occurs in various ways — through joint funding of training projects or by designing and coordinating training programs funded by other divisions. Such is the case with a project in the Philippines. The Integrated Research Crop Program in Visayas State is a massive undertaking that involves five of IDRC's divisions as well as the Regional Office for Southeast and East Asia. The Program's work in developing new varieties of crops and crop products will be expanded to include the whole range of activities from growing to processing to distribution. The Division's contribution will be to develop an ongoing training program at the Philippines Root Crop Research and Training Centre. If successful, this Centre may become the most important root-crop institution in Southeast Asia.

In addition to the individual awards, listed on page 64, the Centre supported the enrollment of 12 young trainees from developing countries at the Hague Academy of International Law — nine for a 3-week training course and three for doctoral studies.

Specialized training

Under the Specialized Training Program, the Division continues to support the Pearson Fellowships. Named after the former Canadian Prime Minister, Lester B. Pearson, who was Chairman of IDRC's Board of Governors from 1970 until his death in December 1972, the Fellowships are offered to young public servants from developing countries who have had at least 3 years' working experience in the service of their government. Candidates are nominated through Canadian missions abroad and IDRC's regional offices. Pearson fellows spend 9–12 months in Canada where they pursue a nondegree program made up of academic studies and attachment to a government department. All Pearson fellows take part in a special program in public administration designed jointly by the School of Public Administration at Carleton University and the Faculty of Administration at the University of Ottawa. The 17 Pearson fellows for 1988–1989 are listed on page 64.

The Centre authorized the creation of an internship program aimed at providing learning opportunities, through hands-on experience, to individuals from institutions all over the world that receive support from the Centre. Fifteen internships are provided on a yearly basis to be tenured in Ottawa or in one of the Centre's regional offices. The interns are attached to the various programs and their work is supervised by the associate directors in the divisions.

Training for careers in development — Canada

Under the Training for Careers in Development — Canada Program, the Young Canadian Researchers' Awards are designed for doctoral students registered in a Canadian university. The aim of this Program is to encourage the students' involvement in scientific areas of concern to IDRC and to give them, at the same time, exposure to problems of Third World countries. At the doctoral level, students in the following fields are eligible to apply: agriculture, food and nutrition sciences, communications, engineering and earth sciences, information sciences, health sciences, and social sciences.

Candidates at the master's level are restricted to the fields of communications/media and journalism, financial and administrative management, health sciences, and information sciences. Young Canadian professionals in communications/media and in financial or administrative management are also eligible to apply. Study, placement, or research programs take place in Third World countries for up to 12 months. Award holders, who are listed on page 66, were selected jointly by staff of IDRC's program divisions and Fellowships and Awards.

The Division offers the John G. Bene Fellowship in Social Forestry, which is administered by IDRC but funded from an endowment established by the estate of the late John G. Bene, a former governor of IDRC, and by public subscription. This fellowship is awarded to a postgraduate student in forestry whose research explores the problems and promise of forestry in economic and social development.

Health Sciences

81 projects, \$15.1 million

The research programs of the Health Sciences Division are organized on the basis of a holistic model of the ecology of health. This model embraces the many elements that influence the health of a community and its people. The Division recognizes three groups of such elements that together create the health and illness of communities. These groups are the basis of the Division's three research programs: Health and Community, Health Systems, and Health and Environment.

The programs focus explicitly upon people and their communities. They are interdependent and interactive and form a continuum from research on health and health-related problems as perceived by community members to research on health problems identified by health experts.

An integral part of all three divisional research programs is the Integrated Support for Research Institutions (ISRI). Health Sciences will, by 1993, allocate up to 30% of its funds for divisional and interdivisional ISRI activities. The objective of ISRI is to improve the indigenous research capacity of Third World health-care institutions so that they may evolve a more cost effective, equitable, and sustainable community-based health system.

A primary example of ISRI activities is the *Health development project at Pahou* in Bénin. Based in the Faculty of Health Sciences at the Université de Bénin, the project will create a centre for research and training in public health that will

take a multidisciplinary approach in exploring all aspects of community health.

The centre will carry out research on all aspects of community-based primary health care — including financing, preventive health care, and health promotion, maintenance, and education. Also, it will train health-care workers for Bénin and other African countries, as well as providing community-centred health systems and services to the Ouidah district of Bénin and consulting services for the Ministry of Health. If successful, this project will serve as a model, and a catalyst, for other African nations.

ISRI will give financial stability to the Pahou team, help in training personnel, and facilitate the expansion of research activities.

Health and the community

The Health and Community Program will identify and develop action-oriented, community-based research initiatives. Priority will be given to projects that examine how socioeconomic conditions and human behaviour affect health. These will be complemented by projects examining strategies to improve the health of individuals, families, and communities by involving them in possible solutions.

The program will support research on the social, cultural, and economic factors that influence a community's acceptance or rejection of information about behavioural traits that improve, maintain, or impair the health of its members. It will stress ways of effectively conveying information and of introducing technologies that influence community health, as well as ways of stimulating communities to apply information correctly and consistently and to use and maintain the new technologies properly. Great importance will also be given to examining the types of community organizations that should be involved — what methods can be used to allow these organizations to identify the health needs and priorities of communities and the style of public action to address these needs.

Over the next 4 years, the Health and Community Program will continue to develop several themes in collaboration with other Health Sciences programs, IDRC divisions, and outside agencies. They include health education; strategies to improve nutritional status; community participation in interventions to improve health; methodologies to promote participatory research; introduction, dissemination, and use of technologies; and study of the contextual and

behavioural aspects of the transmission of communicable diseases. The strengthening of research networks and the elaboration and promotion of innovative methodologies will also be emphasized.

A wide range of research projects has been supported this fiscal year. Among them are interdisciplinary projects, such as *Slum improvement (Indonesia)* and *Self-medication among the urban poor (Peru)*, that emphasize community involvement in improving health status. Studying methods of improving the nutritional status of family members, in particular women and children, is the basis of two projects: *Iron supplementation delivery schemes (Thailand)* and *Maternal nutrition in subsistence farmers (Malawi)*. *Sexual practices and risk factors for AIDS (Senegal)* and *Condom acceptability and use (Nigeria)* were two projects that investigated the social and behavioural aspects in the spread of sexually transmitted diseases. Lastly, commitment to health-education research continues to be a priority. The development and testing of socially and culturally relevant health-education materials is the focus of two projects: *Nutrition training and education (the Philippines)* and *Message for improving rural hygiene (Nepal)*.

Health systems

The Health Systems Program links the community and its health needs to the health-care systems and available or required services. These systems extend from ministries of health and tertiary-care facilities to dispensaries and traditional health services in the village. The program includes research on appropriate health-care providers, the curricula necessary to train them, and the infrastructure needed to give them sustained support and to manage the systems of care delivery. The program has four major themes: management and delivery of health services, health services planning, health policy, and strengthening the research capacity of indigenous institutions.

A project that includes all these themes is *Research in health-management and administration (West Africa)*. This project, in collaboration with the University of Montreal, will provide significant institutional support to the African Centre for Management and Administrative Studies to assist in developing a health management and administration program for the francophone countries of West Africa.

In several projects, there is an attempt to link university health sciences with health ministries and local communities that are involved in

developing primary health-care policy and services. Notable are the primary health care initiative of the Université du Bénin and the project based at Suez Canal University — *Community participation in health promotion at the district level (Egypt)*.

Development of measures to determine health status and surveillance systems for health-care needs, assessment, and monitoring is the subject of two projects, *Sentinel site surveillance to measure health impact (Mexico)* and *Integrated district diagnosis and health planning (Kenya)*.

It is expected that projects specifically designed to evaluate various means of funding health services and their effectiveness and efficiency will form an increasing proportion of this Program's plan of action.

Health and the environment

The Health and Environment Program includes research on the physical and biological elements in the environment that affect the health of the poor. It is purposefully moving toward an integrated approach to health research. To this end, attempts are made to develop multidisciplinary projects that account for many interlocking themes and factors. Health needs and priorities, identified by communities, are being covered, as are research activities to develop appropriate technologies to maintain and improve the health of the underprivileged.

To promote a better understanding of health-related environmental factors, the Health and Environment Program continues to encourage discussion and research on water and water use, with particular emphasis on accessibility to potable-water supplies and water quality.

The Program is committed to the ongoing development and refinement of technologies that were, in the past, an important health sciences contribution to development in the Third World. However, as stated earlier, several projects now emphasize sustainability and community-based disease control. A number of such projects on solid-waste disposal and the use of botanical pesticides to control insects have been supported in Colombia, Nepal, and Peru. A similar activity is supported for schistosomiasis control in Zimbabwe.

Development and dissemination of hard technology have been a mainstay of the Program: a project to develop an efficient and usable hydraulic ram pump has been instituted at the Universiti Malaya, which has been responsible for the development of the handpump network of projects. Furthermore, the Program has encouraged the

development of simple, efficient, and cheap diagnostic technologies for such diverse conditions as AIDS (acquired immune deficiency syndrome) and dengue. These will, it is hoped, facilitate a quick community-level diagnosis of such diseases.

A joint project with the Social Sciences Division has been developed and funded on the occupational health of agricultural workers using pesticides. The Program has maintained its interest in joint funding of projects whenever it was likely to benefit recipient institutions. A good example is a three-country project investigating pesticide poisoning in East Africa, cofunded with the Institute of Occupational Health of Finland, which will provide most of the training.

Information Sciences 57 projects, \$10.8 million

The Information Sciences Division continued to pursue three main objectives: building indigenous capacity within developing countries to manage and apply information effectively; improving systems, services, and tools to manage and use information relevant to development research and change; and fostering cooperation and coordination in development research by sharing information. The Division pursues its goals by supporting projects that deal with the specific informational needs of developing countries. It also attempts to strengthen existing information networks by encouraging regional cooperation and by helping to train personnel.

Africa strategy

During 1988–1989, the Division's concerted effort was directed toward improving information management in Africa. A strategy has been formulated to provide a framework for selecting and evaluating information projects that are consistent with sub-Saharan Africa's own priorities.

About half of the Division's program funds were appropriated to support activities in Africa. A major project was launched to establish a school of information studies for Africa at Addis Ababa University in Ethiopia. This postgraduate program has been developed in response to the growing demand for specialists who can manage the information resources needed to support the development process in Africa. Graduates from the program will serve as professional planners and managers of information systems and as trainers and educators in the field.

Several sectoral information systems were

supported in Africa. The development of the Industrial Information System in Kenya will attempt to build a comprehensive data bank of Kenya's industrial sector. This is in line with the Division's strategy of increasing the ability of East African countries to expand their capacity to handle industrial information and thus contribute to national development.

A pilot project on records management in Uganda will draw upon the expertise of senior archivists from Kenya, Tanzania, Uganda, and Zambia. By encouraging regional cooperation and the exchange of experience among the countries, it is hoped that the effective management of official records will improve the governments' decision- and policy-making abilities.

Support was also given to the Centre régional africain de technologie to establish a regional information network on food technologies that will serve as a mechanism for information exchange and dissemination in Africa.

Sub-Saharan Africa suffers from a poor infrastructure for telecommunications, lack of personnel, and a paucity of institutions involved in telematics research. The Division has supported projects to stimulate research and to develop expertise in this topic. Posting of a telematics specialist to the Centre's regional office in Nairobi is one way in which the Division has improved its ability to respond to local needs.

Networking

Many networking projects have been supported to promote information sharing and information technology within developing countries.

A third phase of the Sahelian Scientific and Technical Information and Documentation Network (RESADOC) has been implemented. It will enable the network to support participating centres in countries with the weakest information infrastructures. Its information products and services will be diversified to meet the particular needs of researchers and extension workers, and the research results will be disseminated more widely than to just the scientific community.

A second phase of the Indonesian Fisheries Information System will link 23 local centres for fisheries information, thereby reaching out further to the end-users of the information.

A grant to the International Board of Soil Research and Management, headquartered in Thailand, will help establish an information service unit. This unit will reinforce the activities of the

Soil Management Network and the National Agricultural Research Services by supplying relevant information and improving capacity to handle information.

Bringing information to the users

The Division's shift in emphasis from support of global information systems to a more focused response was intensified in 1988–1989. By creating specific information systems geared to the needs of decision-makers, researchers, practitioners, and local communities, development problems have a greater chance of being solved. Often this involves collaboration with nongovernmental organizations, such as the Consumer Information Resource Centre in India. This Centre will provide information services to over 200 urban and rural consumer groups seeking to protect the rights, and to raise the quality of life, of India's disadvantaged populations.

A similar project at the Institut africain pour le développement économique et social in Côte d'Ivoire helps rural people to use new technology to improve their daily life. With the Division's assistance, the Institute will intensify production of documentation to reach out more to populations that are socially, geographically, and educationally disadvantaged and will improve the competence of trainers in the effective use of audiovisual materials.

New information technology

The use of appropriate new information technology has been tried in various pilot projects.

Experience with the Geographic Information System for the Dongting Lake Region of China, designed for flood control and land management, will be shared with other countries. In India, a project will test the use of computer-assisted cartography to represent complex sets of data for planning at the subnational level. The resulting information system will assist planners in evaluating economic development and social change in Bihar State.

A workshop on remote sensing was organized in Lagos, Nigeria, in October 1988, where experts from Bénin, Cameroon, Ghana, Nigeria, and Zimbabwe discussed methodological aspects of resource mapping in Africa. The outcome of these discussions will be incorporated into future program planning.

The Division also financed a workshop on expert systems in agriculture held in the Philippines in June 1988. Nine possible applications of expert systems in agriculture or rural development were

presented at the workshop; these were mostly designed to make research results more accessible at the grass-roots level to farmers and extension workers.

Another project, *Public enterprise evaluation by expert systems (Peru)*, is expected to have a positive effect on the performance of public enterprises, which constitute an important sector of the Peruvian economy. If this technique proves effective, it will be used to help strengthen local capacity to evaluate performance. Various other applications of expert systems are being considered in different sectors as means of bringing research results to decision-makers and practitioners in usable formats.

MINISIS software

MINISIS (Interactive Minicomputer System for Information Retrieval and Library Management) is a powerful software package developed by the Division for library and other applications. Decentralization of the dissemination, support, and technical development activities of MINISIS has progressed steadily, increasing the self-sufficiency of MINISIS-user communities in developing countries.

Two new MINISIS Resource Centres were initiated during 1988–1989: one, at the Shreemati Nathibai Damodar Thackersey Women's University in India, is national in scope and the other, at the African Intellectual Property Organization in Yaoundé, Cameroon, is for the francophone countries of West Africa. Trained staff will, in turn, provide user-support services, local training, and develop local applications.

Together with the ScienTech Information Centre in China and the Arab League Documentation and Information Centre in Tunis, there are now four MINISIS Resource Centres. Support for local MINISIS resource persons in Colombia and Mexico, initiation of a MINISIS internship program, and posting of two MINISIS outreach officers to India and Cameroon, all help to strengthen the Division's new direction in decentralizing support capabilities for MINISIS. Meanwhile, a major effort to enhance the software by introducing new features that will make MINISIS more "user friendly" and improve its capabilities is progressing well.

Centre library

During 1988–1989, the library was reorganized to strengthen services to users and the library's advisory and training role. This included

strengthening the service capacity and self-sufficiency of the small libraries in each of the Centre's regional offices. The Centre Library is recognized as having a major collection in development research. Of particular note, the archives of the World Commission on Environment and Development (the Brundtland Commission) were transferred to the IDRC Library. The material has since been microfilmed and indexed in the library data base.

Social Sciences **92 projects, \$15.3 million**

In 1988–1989, the Social Sciences Division implemented the recommendations of an in-depth divisional review completed in March 1988.

The Division's work is organized under three programs: Economic Policy; Population, Education, and Society; and Regional Development. Also, two Units — Environment and Women in Development — serve the whole Centre. The Division pioneered the establishment of such units, which for administrative purposes are housed in one division but whose activities apply to several divisions. The units have specific mandates to support interdisciplinary and intersectoral research and to focus attention on particular issues that cut across "traditional" areas of research support. In addition, the Division will continue to support, for another 2 years, an experimental research program — Public Policy and Participation.

Economic policy

The Economic Policy Program continues to link researchers from different countries who are working on similar topics. Of particular note in 1988–1989 was a new eight-country network in francophone Africa dealing with industrial policy. Administered by the Council for Development of Economic and Social Research in Africa in Senegal with technical support from the Centre de recherche et développement en économie in Montreal, the project links researchers and policymakers and is coordinated with the activities of several other donors.

A smaller network on industrial policy in Latin America continues, with a project in Uruguay recently receiving renewed support. With the United Nations Development Programme, the Program cofinanced a 2-year grant to the United Nations Conference on Trade and Development. This will help the agency organize technical support services for 24 developing countries that will be dealing with international monetary issues.

Population, education, and society

The Population, Education, and Society Program was formed in 1988 by amalgamating the former Population and Development Research Program and the Education Program. It focuses on four research areas: population dynamics, education systems and processes, human survival and development, and indigenous knowledge and culture.

In sub-Saharan Africa, a series of projects was supported to gain new knowledge relevant to development processes and to enhance individual and institutional research capacity. Many of the activities explored the problems of maternal and infant mortality. Other studies concentrated on the role of national languages in schools and the overall efficiency and effect of basic education.

In Latin America, several collaborative projects were supported between the Program and the Health Sciences Division, and plans were laid for more cooperation in the area of health education. Studies were also done on how to use population research results for both policy planning and programing by nongovernmental organizations and on how to strengthen qualitative research methodologies.

A special effort was made in Asia to assess the major research issues and institutions in the area of community-based nonformal education. Plans were also made to support research on child development and family planning in South Asia and on the interaction of population, health, and development issues in Southeast Asia. Similar issues will probably become the focus of work in the Middle East.

The Program also placed particular emphasis on evaluating past research and on disseminating research reports. A large number of books from such research were published by the Centre or by local research institutions and publishers (see pages 68–80).

Regional development

In 1988–1989, the Regional Development Program supported policy-oriented research related to shelter and service delivery, urban management, rural development, and regional planning.

Two large projects in Asia were supported. One was on the development of remote areas in Nepal and the other on regional industrialization in Malaysia. In Africa, the program supported projects on unregulated housing in Kenya, urban management in Nigeria, land policy in Uganda, and

rural food security in Zimbabwe, among others. In Latin America, support included projects on urban land in Ecuador, intermediate cities and regional development in Mexico, small-scale enterprises and low-income housing in Peru, and natural disasters in Central America. Two collaborative projects were approved: one on low-cost transport modes in China involving the University of Calgary and another on food production in the Dominican Republic involving the University of Sherbrooke in Quebec.

Two important international workshops were supported: on local government in South Africa and Zimbabwe and on urban management in Africa.

Environment

This year, the Social Sciences Division established a new group with Centre-wide commitment — the Environment Unit. It was set up both to support research on environment and sustainable development and to serve in an advisory capacity to the many Centre projects and programs that have an environmental dimension. The Unit is committed to support of projects with a strong policy focus but will also identify areas of scientific analysis, such as habitat protection, that are not currently covered by other Centre programs.

During its 1st year, the Unit has supported eight new projects — either alone or in collaboration with other programs and divisions. Among these are an energy use–air pollution network in Southeast Asian cities and a review of use of common-property land in Zimbabwe. In collaboration with the Fellowships and Awards Division, the Unit has also set up an environment awards program to support educational efforts and provide research. As well, funds have been provided to ensure that environmental studies can be recognized as eligible for IDRC's young Canadian researcher awards at the master's degree level.

The Unit is responding to the enormous worldwide interest in global environmental problems. Through a variety of mechanisms, support is offered to researchers in developing countries so that their interests and experience can be brought into the international arena in which scientific results and policy options are discussed.

Women in development

The Women in Development Unit was established as a Centre-wide activity in 1987 to support research on the integration of women into development and to act as a resource for gender-specific and gender-related research. During

1988–1989, the Unit continued to build up a portfolio of projects and training activities in different regions of the world. Projects focused on the participation of women in industrial development, agricultural production, informal sector activities, and various aspects of social and political development. Of particular interest was a major network project, based in Africa, that focuses on the role of women in natural resource management. The Unit continued to work closely with the other divisions of IDRC and with regional offices in an effort to incorporate a gender perspective, where appropriate, into all projects supported by the Centre.

In 1988–1989, the Unit began an in-house training activity, by organizing a 1-day workshop on gender analysis in research design. This was conducted for the staff of the Agriculture, Food and Nutrition Sciences Division. The Unit continued to support the Summer Institute in Gender and Development at St Mary's and Dalhousie universities in Halifax as well as regional training initiatives in Brazil and Tanzania. The Unit's internship program allowed researchers from Argentina, Brazil, India, the Philippines, and Thailand to spend up to 6 months working with various divisions at the Centre's headquarters in Ottawa.

Public policy and participation

Public policy and participation is an experimental program. Its goal is to study how political and bureaucratic considerations affect public policy, especially when that policy concerns the most disadvantaged groups in a developing country.

An important network project on research into community participation in Central America and the Caribbean links research teams in Costa Rica, Cuba, Jamaica, Nicaragua, and Canada. This is being coordinated by the Centre for Research on Latin America and the Caribbean at York University in Toronto.

Division initiatives

The Division Initiatives Fund is designed to support innovative research that does not fall within existing program activities. Of particular note in the past year is an institutional grant to the Council for the Development of Economic and Social Research in Africa to continue its work to strengthen social science research. This grant was made in collaboration with several other divisions in the Centre.

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Financial commentary and highlights

For the fiscal year 1988–1989, the International Development Research Centre received a total grant of \$114.2 million representing 3.9% of the 1988–1989 gross commitment for Official Development Assistance (ODA). For the 1989–1990 fiscal year, the grant allocated to the Centre has been reduced to \$108.5 million.

During 1988–1989, the Centre continued to maintain a freeze on the staff complement at Head Office and implemented a series of recommendations aimed at enhancing the efficiency and effectiveness of its operations.

Revenue

Total Centre revenues amounted to \$121.3 million, a 7.9% increase over 1987–1988. Revenues include the Parliamentary grant of \$114.2 million, investment and other income of \$2.9 million, and income for contract research of \$4.2 million. Figure 1 illustrates the trend in total revenue over the last 5 years.

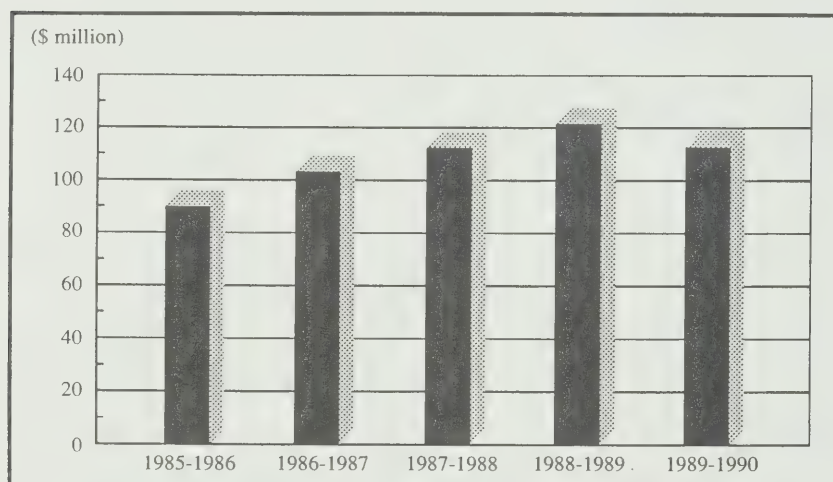


Figure 1. Total revenue for the Centre for 1985–1986 (actual) to 1989–1990 (budget).

The Parliamentary grant of \$114.2 for 1988–1989 represents an increase of \$6.1 million over the 1987–1988 grant or 5.6%. The \$2.9 million of investment and other income in 1988–1989 exceeded the budgeted target of \$2.1 million. Investment income amounted to \$2.6 million compared to the budgeted \$1.8 million. The favourable variance is due to a higher than expected investment portfolio during the whole year, and to higher rates of interest. Other income amounted to \$0.3 million, as budgeted. This figure includes \$0.2 million of MINISIS licence fees and \$0.1 million in other income.

Contract research revenues totaled \$4.2 million in 1988–1989. This value includes \$2.4 million received from the Canadian International Development Agency (CIDA) for research conducted or managed by the Centre on its behalf, and \$1.6 million received from Health and Welfare Canada for the V International Conference on AIDS (acquired immune deficiency syndrome) organized by the Centre.

For 1989–1990, total revenue of \$112.9 million is projected, a decrease of 6.9% over 1988–1989.

Expenditure

In 1988–1989, total Centre expenditures amounted to \$116.0 million. This amount represents an increase of 9.6 million or 9.0% over 1987–1988. Figure 2 outlines the relative share of each category of expenditure for 1988–1989.

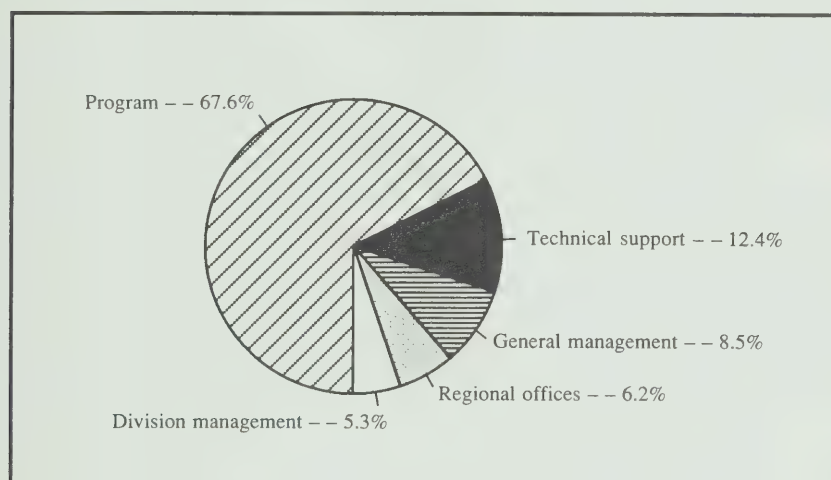


Figure 2. Breakdown of actual expenditures for 1988–1989.

The following table shows the 1989–1990 budget expenditures with actual expenditures reported for 1988–1989 and the previous 3 years (values are in millions of dollars).

	Budget		Actual							
	1989– 1990	% of total	1988– 1989	% of total	1987– 1988	% of total	1986– 1987	% of total	1985– 1986	% of total
Development research	\$ 73.2	59.1	\$ 67.9	58.5	\$ 62.4	58.6	\$ 60.4	59.8	\$54.6	59.7
Technical support	14.2	11.5	14.4	12.4	13.6	12.8	12.9	12.8	12.0	13.1
General management	11.7	9.4	9.9	8.5	10.4	9.8	9.4	9.3	8.7	9.5
Research-related activities	9.8	7.9	10.5	9.1	8.8	8.3	8.4	8.3	7.0	7.7
Regional offices	7.5	6.1	7.2	6.2	5.8	5.5	5.4	5.3	5.0	5.5
Division management	7.5	6.1	6.1	5.3	5.4	5.1	4.5	4.5	4.2	4.6
Total	<u>\$123.9</u>	<u>100.0</u>	<u>\$116.0</u>	<u>100.0</u>	<u>\$106.4</u>	<u>100.0</u>	<u>\$101.0</u>	<u>100.0</u>	<u>\$91.5</u>	<u>100.0</u>

Development research

Development research reflects the direct costs of all scientific and technical research projects supported by the Centre in developing countries. It is, in essence, the *raison d'être* of the Centre. This category includes support for Centre projects and international research networks; projects that are identified, developed, and managed by developing-country researchers; and contract research projects that are administered on behalf of other donor organizations.

In 1988–1989, expenditures for development-research activities totaled \$67.9 million or 58.5% of the Centre's total expenditures. Expenditures on existing projects that relate for the most part to development research were higher than the 1987–1988 expenditures by 5.6%, whereas expenditures on new projects increased by 19.1% over the previous year.

Research-related activities

Research-related activities include small projects that lead to the development of research projects and activities relating to information dissemination or application of research results. These activities also include a development-research library, which serves the Canadian development community as well as IDRC staff, and small projects that support ongoing programs of the Centre.

In 1988–1989, expenditures for research-related activities totaled \$10.5 million or 9.1% of the Centre's total expenditures.

Technical support

This category of expenditures includes the cost of program personnel, whose role is to develop new projects, monitor ongoing research projects, and provide technical assistance to recipients. Expenditures for technical support in 1988–1989 were \$14.4 million. This amount represented 12.4% of total Centre expenditures, a slight decrease over 1987–1988.

For 1989–1990, technical support expenditures are budgeted at \$14.2 million, a decrease of 1.4% due to the cancellation of new person-years and a reduction in all travel budgets. The share of this category of expenditure to total expenditure will be reduced to 11.5%.

Regional offices

Six regional offices play an important role in facilitating contacts with grant recipients and in enhancing the Centre's ability to respond to Third World issues. These offices are located in Colombia, Egypt, India, Kenya, Senegal, and Singapore. The total expenditure incurred in 1988–1989 to operate these offices amounted to \$7.2 million, an increase of 23.1% over 1987–1988. This category represented 6.2% of total Centre expenditures for 1988–1989.

For 1989–1990, regional office expenditures are budgeted at \$7.5 million, the same level as 1988–1989, because of the cancellation of new person-years and a reduction in travel expenses.

Division management

Division management expenditures totaled \$6.1 million in 1988–1989, a 12.1% increase over 1987–1988, and amounted to 5.3% of the total Centre expenditures for 1988–1989. The increase is mainly due to the higher accommodation costs at the head office.

Expenditures for division management are expected to increase by 23.0% in 1989–1990 to about \$7.5 million. This category's share of total Centre expenditures will increase slightly from 5.3% in 1988–1989 to 6.1% in 1989–1990.

General management

To support its overall operations, the Centre requires policy, executive, administrative, and service functions. Within the context of IDRC, such functions are represented by the Board of Governors; the offices of the Executive, Secretary and General Counsel, Treasurer, and Human Resources; and the Administration, Electronic Data Processing, and Internal Audit departments.

General management expenditures amounted to \$9.9 million in 1988–1989, a decrease of 4.6% over 1987–1988. Most of the decrease resulted from savings in salaries and benefits, and travel expenses. This category's share of total Centre expenditures has decreased from 9.8% in 1987–1988 to 8.5% in 1988–1989.

For 1989–1990, the budgeted expenditures are set at \$11.7 million, an increase of 18.2% from 1988–1989.

Equity of Canada

The equity level as at March 31, 1989 increased to \$13.9 million from the \$8.6 million reported in the previous year. The high level of the year-end equity is due to higher than expected revenues and a lower rate of program expenditures, as already explained. For 1989–1990, the year-end equity is estimated to drop to \$2.9 million.

Person-years

For 1988–1989, the number of person-years hired through the Centre's Head Office totaled 427.4 compared to a budget of 466.5. Vacancies were incurred primarily under technical support and resulted from delays in filling vacant positions. For 1989–1990, the number of person-years hired through the Head Office is budgeted at 459.5 person-years.

Appropriations

Total Centre appropriations for 1988–1989 were \$141.3 million compared to \$124.9 in 1987–1988 and represent a 13.1% increase over the previous year. Included in this amount are new projects for \$103.7 million representing 73.4% of the total amount appropriated during the fiscal year. Figure 3 shows the allocation of program appropriations by geographic region.

For 1989–1990, total appropriations are estimated to reach \$115.9 million with the program appropriations sharing \$75.0 million or 64.7% of the total.

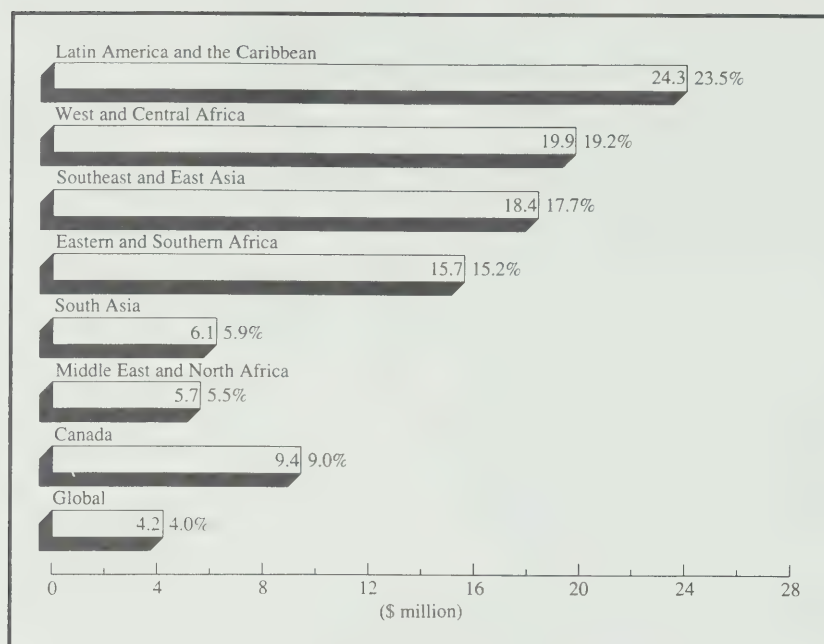


Figure 3. Actual appropriations for 1988-1989 by region.

Responsibility for financial statements

The financial statements have been prepared by management in accordance with generally accepted accounting principles appropriate in the circumstances. Management also assumes responsibility for all other information in the annual report, which is consistent, where applicable, with that contained in the financial statements. In support of its responsibility, management maintains financial and management control systems and practices to provide reasonable assurance as to the reliability of financial information, and that the assets are safeguarded and the operations are carried out effectively. The Centre has an internal audit department whose functions include reviewing internal controls and their application on an ongoing basis.

The Board of Governors is responsible for ensuring that management fulfills its responsibilities for financial reporting and internal control. The Board exercises its responsibilities through the Finance and Audit Committee whose members are not employees of the Centre. The Committee meets with management, the internal auditors, and the external auditors on a regular basis.

The Auditor General of Canada conducts an independent examination in accordance with generally accepted auditing standards and expresses his opinion on the financial statements. His examination includes a review and evaluation of the Centre's system of internal control and appropriate tests and procedures to enable him to report whether the financial statements are presented fairly. The external auditors have full and free access to the Finance and Audit Committee of the Board.

Financial highlights (\$ 000)

	Budget 1988-1989	Actual 1988-1989	% variance from budget	Actual 1987-1988	1987-1988 vs 1988-1989 (% change)
FINANCIAL ACTIVITY					
Revenue	<u>\$119,500</u>	<u>\$121,293</u>	<u>1.5</u>	<u>\$112,417</u>	<u>7.9</u>
Grant from Parliament of Canada	114,200	114,200	0.0	108,100	5.6
Contract research	3,200	4,199	31.2	2,107	99.3
Investment and other income	2,100	2,894	37.8	2,210	31.0
Expenditure	<u>\$121,100</u>	<u>\$115,975</u>	<u>4.4</u>	<u>\$106,401</u>	<u>9.0</u>
Existing projects*	53,440	50,309	5.9	47,630	5.6
New projects*	29,100	28,060	3.6	23,552	19.1
Technical support	15,180	14,471	4.7	13,613	6.3
General management	9,870	9,887	(0.2)	10,363	(4.6)
Regional offices	7,450	7,177	3.7	5,828	23.1
Division management	6,060	6,071	(0.2)	5,415	12.1
Excess of revenue over expenditure (expenditure over revenue)	<u>(\$1,600)</u>	<u>\$5,318</u>	<u>432.4</u>	<u>\$6,016</u>	<u>11.6</u>
PROGRAM ACTIVITY					
Appropriations	<u>\$142,590</u>	<u>\$141,265</u>	<u>0.9</u>	<u>\$124,904</u>	<u>13.1</u>
New projects	104,030	103,659	0.4	89,685	15.6
Technical support	15,180	14,471	4.7	13,613	6.3
General management	9,870	9,887	(0.2)	10,363	(4.6)
Regional offices	7,450	7,177	3.7	5,828	23.1
Division management	6,060	6,071	(0.2)	5,415	12.1
Commitments	<u>\$133,420</u>	<u>\$126,834</u>	<u>4.9</u>	<u>\$120,154</u>	<u>5.6</u>
Projects	94,860	89,228	5.9	84,935	5.1
Technical support	15,180	14,471	4.7	13,613	6.3
General management	9,870	9,887	(0.2)	10,363	(4.6)
Regional offices	7,450	7,177	3.7	5,828	23.1
Division management	6,060	6,071	(0.2)	5,415	12.1

* Includes contract research and division activity projects.

Five-year financial review (\$ 000)

	Budget 1989-1990	Actual 1988-1989	Actual 1987-1988	Actual 1986-1987	Actual 1985-1986
RESULTS OF OPERATIONS					
Revenue	<u>\$112,900</u>	<u>\$121,293</u>	<u>\$112,417</u>	<u>\$102,401</u>	<u>\$89,663</u>
Grant from Parliament of Canada	108,500	114,200	108,100	100,000	86,000
Investment and other income	2,200	2,894	2,210	978	1,881
Contract research	2,200	4,199	2,107	1,423	1,782
Expenditure	<u>\$123,900</u>	<u>\$115,975</u>	<u>\$106,401</u>	<u>\$100,969</u>	<u>\$91,486</u>
Development research*	73,213	67,875	62,362	60,382	54,585
Research related activities	24,008	10,495	8,820	8,421	7,003
Research operational support	14,983	27,718	24,856	22,812	21,183
General management	11,696	9,887	10,363	9,354	8,715
Excess of revenue over expenditure (expenditure over revenue)	<u>(\$11,000)</u>	<u>\$5,318</u>	<u>\$6,016</u>	<u>\$1,432</u>	<u>(\$1,823)</u>
PROGRAM ACTIVITY					
Appropriations	<u>\$115,852</u>	<u>\$141,265</u>	<u>\$124,904</u>	<u>\$111,517</u>	<u>\$102,199</u>
New projects**	75,000	103,659	89,685	79,351	72,301
Technical support	14,173	14,471	13,613	12,876	12,012
General management	11,696	9,887	10,363	9,354	8,715
Regional offices	7,514	7,177	5,828	5,394	4,947
Division management	7,469	6,071	5,415	4,542	4,224
Commitments	<u>\$135,160</u>	<u>\$126,834</u>	<u>\$120,154</u>	<u>\$105,099</u>	<u>\$95,383</u>
Projects***	94,308	89,228	84,935	72,933	65,485
Technical support	14,173	14,471	13,613	12,876	12,012
General management	11,696	9,887	10,363	9,354	8,715
Regional offices	7,514	7,177	5,828	5,394	4,947
Division management	7,469	6,071	5,415	4,542	4,224
Outstanding commitments	<u>\$113,300</u>	<u>\$104,400</u>	<u>\$96,000</u>	<u>\$88,343</u>	<u>\$88,900</u>

* Includes contract research.

** Includes division activity projects.

*** Excludes contract research (special projects).

Person-year levels

	1989–1990	1988–1989		1987–1988	
	Budget	Budget	Actual	Budget	Actual
PROGRAM DIVISIONS	<u>298.00</u>	<u>300.00</u>	<u>271.20</u>	<u>297.50</u>	<u>285.50</u>
Agriculture, Food and Nutrition Sciences	48.50	50.00	44.80	50.50	50.00
Social Sciences	48.00	48.50	43.30	48.00	45.75
Information Sciences	42.50	41.50	37.70	39.50	37.75
Project-related staff	36.50	37.50	33.50	39.50	36.75
Health Sciences	36.00	36.00	31.50	35.00	35.00
Communications	26.00	25.50	22.50	26.00	22.25
Project-related staff	19.00	19.00	17.40	18.00	19.75
Earth and Engineering Sciences	18.00	19.00	17.50	18.00	15.50
Office of Planning and Evaluation	12.00	11.00	11.40	11.00	11.00
Fellowships and Awards	11.50	12.00	11.60	12.00	11.75
GENERAL MANAGEMENT	<u>158.50</u>	<u>161.50</u>	<u>156.20</u>	<u>163.50</u>	<u>161.25</u>
Office of the Treasurer	39.00	39.00	37.70	97.00	92.00
Administration department*	35.00	37.00	35.60		
Electronic Data Processing*	14.00	14.00	13.40		
Office for Human Resources	19.50	19.50	21.70	19.50	21.50
Office of the Secretary and General Counsel	17.00	15.00	16.40	15.00	16.25
Executive Office	15.00	18.00	14.30	19.00	19.00
Regional Offices Administration	14.00	14.00	13.70	8.00	8.00
Internal Audit	5.00	5.00	3.40	5.00	4.50
SECONDMENTS/SABBATICAL/ STUDY LEAVE	<u>3.00</u>	<u>5.00</u>	<u>0.00</u>	<u>3.00</u>	<u>3.00</u>
TOTAL: HEAD OFFICE-HIRED STAFF	<u>459.50</u>	<u>466.50</u>	<u>427.40</u>	<u>464.00</u>	<u>449.75</u>

* Included under the Office of the Treasurer in 1987–1988.



AUDITOR GENERAL OF CANADA

VÉRIFICATEUR GÉNÉRAL DU CANADA

AUDITOR'S REPORT

To the International Development Research Centre
and the
Secretary of State for External Affairs

I have examined the balance sheet of the International Development Research Centre as at March 31, 1989 and the statements of operations, equity of Canada and changes in financial position for the year then ended. My examination was made in accordance with generally accepted auditing standards in Canada, conforming with International Auditing Guidelines, and accordingly included such tests and other procedures as I considered necessary in the circumstances.

In my opinion, these financial statements present fairly the financial position of the Centre as at March 31, 1989 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles in Canada, conforming with International Accounting Standards, applied on a basis consistent with that of the preceding year.

A handwritten signature in cursive script, reading "Kenneth M. Dye".

Kenneth M. Dye, F.C.A.
Auditor General of Canada

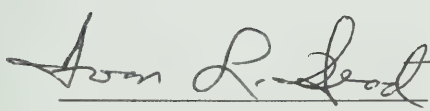
Ottawa, Canada
June 2, 1989

Financial statements for the year ended March 31, 1989

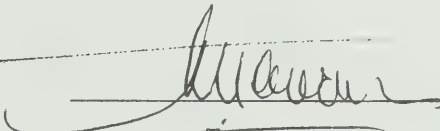
Balance sheet as at March 31, 1989

	1989	1988
ASSETS		
Current		
Cash and short-term deposits (Note 3)	\$26,897,087	\$18,804,032
Accounts receivable	888,653	739,013
Prepaid expenses	1,394,660	973,566
	<u>29,180,400</u>	<u>20,516,611</u>
Recoverable deposits	183,430	197,721
Property and equipment (Note 4)	4,770,484	3,427,620
Endowment funds (Note 5)	165,441	151,273
	<u>\$34,299,755</u>	<u>\$24,293,225</u>
LIABILITIES		
Current		
Accounts payable and accrued liabilities (Note 6)	\$12,373,696	\$ 9,421,661
Contract research (Note 7)	2,532,328	685,697
	<u>14,906,024</u>	<u>10,107,358</u>
Accrued employee separation benefits	2,722,679	2,541,719
Deferred rent – Head Office	2,616,835	2,921,709
Endowment funds (Note 5)	165,441	151,273
EQUITY		
Equity of Canada	<u>13,888,776</u>	<u>8,571,166</u>
	<u>\$34,299,755</u>	<u>\$24,293,225</u>

Approved:



 President



 Treasurer

Statement of operations
for the year ended March 31, 1989

	1989	1988
EXPENSES		
Development research activities		
Project grants	\$ 56,898,932	\$ 53,953,596
Centre-administered projects	6,777,332	6,301,802
Contract research (Note 7)	4,198,988	2,107,575
	<u>67,875,252</u>	<u>62,362,973</u>
Research-related activities		
Technical support	14,471,250	13,612,515
Program development support	6,382,458	5,265,836
Information dissemination	2,389,558	2,071,295
Development-research library	1,722,497	1,482,233
	<u>24,965,763</u>	<u>22,431,879</u>
Research operational support		
Regional offices	7,175,783	5,827,616
Division management	6,071,041	5,415,467
	<u>13,246,824</u>	<u>11,243,083</u>
Total research and support expenses (Schedule 1)	106,087,839	96,037,935
General management expenses (Schedule 2)	9,887,429	10,362,988
	<u>115,975,268</u>	<u>106,400,923</u>
REVENUE		
Grant from Parliament of Canada	114,200,000	108,100,000
Investment and other income	2,893,890	2,209,588
Contract research (Note 7)	4,198,988	2,107,575
	<u>121,292,878</u>	<u>112,417,163</u>
EXCESS OF REVENUE OVER EXPENSES	\$ 5,317,610	\$ 6,016,240

Statement of equity of Canada
for the year ended March 31, 1989

	1989	1988
Balance at the beginning of the year	\$ 8,571,166	\$ 2,554,926
Excess of revenue over expenses	<u>5,317,610</u>	<u>6,016,240</u>
Balance at the end of the year	<u><u>\$13,888,776</u></u>	<u><u>\$ 8,571,166</u></u>

Statement of changes in financial position
for the year ended March 31, 1989

	1989	1988
Operating activities		
Cash provided by operations		
Excess of revenue over expenses	\$ 5,317,610	\$6,016,240
Items not affecting cash		
Depreciation and amortization	995,099	944,724
Provision for employee separation benefits	551,298	356,694
Gain on disposal of equipment	<u>(27,883)</u>	<u>(79,157)</u>
	6,836,124	7,238,501
Changes in noncash operating assets and liabilities		
Accounts receivable	(149,640)	(183,314)
Prepaid expenses	(421,094)	(272,901)
Recoverable deposits	14,291	247,033
Accounts payable and accrued liabilities	2,952,035	1,447,121
Payment of employee separation benefits	(370,338)	(292,215)
Contract research liability	1,846,631	(229,992)
Deferred rent	<u>(304,874)</u>	<u>2,651,480</u>
	<u>10,403,135</u>	<u>10,605,713</u>
Investing activities		
Additions to property and equipment	(2,349,863)	(1,088,862)
Proceeds on disposal of equipment	<u>39,783</u>	<u>105,933</u>
	<u>(2,310,080)</u>	<u>(982,929)</u>
Increase in cash	8,093,055	9,622,784
Cash and short-term deposits, beginning of the year	<u>18,804,032</u>	<u>9,181,248</u>
Cash and short-term deposits, end of the year	<u><u>\$26,897,087</u></u>	<u><u>\$18,804,032</u></u>

Notes to financial statements as at March 31, 1989

1. Authority and objective

The International Development Research Centre, a Corporation without share capital, was established in 1970 by the Parliament of Canada through the International Development Research Centre Act. The annual grant received from the Parliament of Canada is pursuant to External Affairs Vote 50 for the years ended March 31, 1989 and 1988 respectively.

The objective of the Centre is to initiate, encourage, support, and conduct research into the problems of the developing regions of the world and into the means for applying and adapting scientific, technical, and other knowledge to the economic and social advancement of those regions.

2. Significant accounting policies

The financial statements have been prepared in accordance with Canadian generally accepted accounting principles, conforming with International Accounting Standards, and reflect the following significant accounting policies.

Property and equipment

Property and equipment are recorded at cost and depreciated over their estimated useful lives. Leasehold improvements are amortized over the terms of the respective leases. The methods and rates used to provide for the depreciation and amortization of property and equipment are:

	<u>Method</u>	<u>Rate (%)</u>
Computer equipment	Straight line	20
Leasehold improvements	Straight line	5-50
Office furniture and equipment	Diminishing balance	20
Vehicles	Diminishing balance	30
Telephone system	Straight line	20

Recognition of revenue

Parliamentary grants are recorded as revenue on an accrual basis.

Revenue in respect of contract research is recognized at the time the related project expenses are incurred. Contract research funds received in excess of expenses are included in current liabilities.

Accrued employee separation benefits

Employees are entitled to specified termination benefits, calculated at salary levels in effect at the time of separation as provided for by conditions of employment. The liability for these benefits is recorded as the benefits accrue to employees.

Deferred rent

Any rent-free period or other benefits associated with long-term leases are deferred and amortized over the term of the lease on a straight-line basis.

Pension costs

Employees are covered by the Public Service Superannuation Plan administered by the Government of Canada. Contributions to the Plan are required from the employees and the Centre. These contributions represent the total liability of the Centre and are recognized in the accounts on a current basis.

Income taxes

The Centre is exempt from any liability for income taxes.

Foreign-currency translation

Foreign-currency transactions are translated into Canadian dollars by the use of an average exchange rate that closely approximates the rate in effect at the transaction date. Monetary assets and liabilities are adjusted to reflect the rate of exchange in effect at year-end. Exchange gains and losses are included in operations for the current year.

3. Cash and short-term deposits

	1989	1988
Cash (bank overdraft)	\$ (179,966)	\$ 211,052
Short-term deposits		
Canadian chartered banks	27,077,053	13,731,820
Trust and mortgage companies	—	3,867,140
Commercial enterprises	—	994,020
	<u>\$26,897,087</u>	<u>\$18,804,032</u>

Cash and short-term deposits include \$2,654,512 (1988, \$756,979) held for contract research and the V International Conference on AIDS (acquired immune deficiency syndrome).

4. Property and equipment

	1989			1988
		Accumulated depreciation and amortization	Net	Net
	Cost			
Computer equipment	\$4,693,405	\$2,100,336	\$2,593,069	\$1,715,871
Office furniture and equipment	1,920,671	1,146,008	774,663	624,332
Vehicles	1,363,216	620,584	742,632	540,545
Leasehold improvements	764,660	268,361	496,299	259,310
Telephone system	759,418	595,597	163,821	287,562
	<u>\$9,501,370</u>	<u>\$4,730,886</u>	<u>\$4,770,484</u>	<u>\$3,427,620</u>

Depreciation and amortization for the year amounted to \$995,099 (1988, \$944,724).

5. Endowment funds

In 1987, the estate of the late John Bene established a fund to provide a postgraduate fellowship in the field of social forestry. During the same year, a former member of the Board of Governors of the Centre established a fund for applied or mission-oriented research.

	<u>1989</u>	<u>1988</u>
Balance at the beginning of the year	\$151,273	\$138,465
Interest income	13,919	12,658
Donations received	5,000	5,150
Expenses	<u>(4,751)</u>	<u>(5,000)</u>
Balance at the end of the year	<u>\$165,441</u>	<u>\$151,273</u>
John Bene	\$154,882	\$146,160
Governor	<u>10,559</u>	<u>5,113</u>
Total endowment funds	<u>\$165,441</u>	<u>\$151,273</u>

6. Accounts payable and accrued liabilities

	<u>1989</u>	<u>1988</u>
Accrued liabilities – projects	\$ 7,278,920	\$5,704,488
Accrued annual and other leave benefits	1,221,879	1,313,885
Other	<u>3,872,897</u>	<u>2,403,288</u>
	<u>\$12,373,696</u>	<u>\$9,421,661</u>

7. Contract research

Contract research relates to research conducted or managed by the Centre and to the V International Conference on AIDS organized by the Centre. Contract research is funded by other international agencies, the Canadian International Development Agency (CIDA), and other federal government entities.

Contract research expenses of \$4,198,988 (1988, \$2,107,575) include \$2,431,480 (1988, \$1,436,190) expended on behalf of CIDA. In addition, the Centre received \$24,511 (1988, \$56,489) as an administration fee from CIDA, which is included in investment and other income.

Contract research current liabilities of \$2,532,328 (1988, \$685,697) include \$608,257 (1988, \$332,537) held on behalf of CIDA.

8. Operating leases

The Centre has entered into various lease arrangements for office premises, equipment, and staff accommodation in Canada and in various countries. The total annual payments under such lease arrangements will be:

Year ending March 31

1990	\$ 5,808,867
1991	5,078,998
1992	4,568,377
1993	4,518,363
1994-1997	<u>19,746,318</u>
	<u><u>\$39,720,923</u></u>

9. Contractual commitments — project grants and program development

The Centre is committed to make payments up to \$104,400,000 during the next 4 years subject to funds being provided by Parliament and subject to compliance by recipients with the terms of project agreements. The Centre has also submitted formal grant offers to prospective recipients totaling \$43,600,000 and is awaiting acceptance of these offers.

10. Comparative figures

The 1988 figures have been reclassified to conform to the statement presentation adopted in 1989.

Schedule of research and support expenses for the year ended March 31, 1989

	1989			1988
	Development research activities	Research-related activities	Research operational support	Total
Programs				
Agriculture, Food and Nutrition Sciences	\$21,911,128	\$ 5,064,039	\$ 1,206,258	\$ 28,181,425
Social Sciences	10,097,831	3,530,678	944,776	14,573,285
Health Sciences	8,784,650	2,916,391	999,033	12,700,074
Information Sciences	8,268,304	2,713,555	1,041,304	12,023,163
Earth and Engineering Sciences	6,859,979	1,562,983	518,921	8,941,883
Fellowships and Awards	5,664,225	874,305	315,723	6,854,253
Program-related activities				
Regional offices	-	1,304,172	7,175,783	8,479,955
Communications Division	894,121	4,172,278	758,501	5,824,900
Special program activities	5,357,033	355,147	-	5,712,180
Development-research library	-	1,722,497	-	1,722,497
External liaison and relations	37,981	749,718	286,525	1,074,224
	\$67,875,252	\$24,965,763	\$13,246,824	\$106,087,839
				\$96,037,935

Schedule 2

Schedule of general management expenses
for the year ended March 31, 1989

	1989	1988
Salaries and benefits	\$6,117,923	\$ 6,523,077
Rent and utilities	1,546,887	1,460,730
Office and sundry	867,119	643,705
Travel and relocation	279,704	513,214
Governors' meetings	279,395	363,618
Depreciation and amortization	260,525	323,311
Professional and special services	283,168	270,587
Telecommunications	190,329	174,484
Working group expenses	19,041	62,258
Insurance	43,338	28,004
	<u>\$9,887,429</u>	<u>\$10,362,988</u>

Projects for which funds were approved during fiscal year 1988–1989¹

Agriculture, Food and Nutrition Sciences

88-0003 Chachafruto (Colombia)

For the Corporación Nacional de Investigación y Fomento Forestal, Bogotá, to increase the productivity of alternative sources of vegetative protein in the Colombian Andes and promote their cultivation within agro-silvo-pastoral systems. \$19 040 — 12 months.

88-0004 Pastoral systems in the Maghreb (Morocco)

For the Institut agronomique et vétérinaire Hassan II, Rabat, to test interventions to improve the living and working conditions of the people of the Moroccan steppes and the stability of the environment. \$100 000 — 15 months.

88-0007 Fish nutrition (Asia)

To enable the Asian Institute of Technology, Thailand, to develop feeding strategies using nonconventional feedstuffs as supplementary feeds to maximize fish production in fertilized pond waters. \$190 200 — 36 months.

88-0008 Marketing sorghum products (Lesotho)

For the Ministry of Agriculture, Maseru, to enable the Division of Agricultural Research to test ways of increasing the consumption of and demand for sorghum as food. \$99 700 — 24 months.

88-0018 Artisanal fisheries network (Chile)

For the Fundación para la Capacitación del Pescador Artesanal, Santiago, in collaboration with the Department of Biology and Marine Technology of the Pontificia Universidad Católica de Chile, Talcahuano, to establish a regional artisanal fisheries network to coordinate research and development, provide liaison, and facilitate the exchange of information, specialized training, and technology transfer among current and planned Centre-supported projects. \$167 500 — 24 months.

88-0019 Female fuelwood carriers (Ethiopia)

For the International Labour Office, Switzerland, in collaboration with the National Urban Planning Institute, Ethiopia, to contribute to the improvement

of the conditions of work and life of female fuelwood carriers in Addis Ababa. \$86 200 — 15 months.

88-0020 Vegetable-seed production (Thailand) — Phase III

For Chiang Mai University to increase the income of hill-tribe farmers through the production of high quality vegetable seed for sale to government agencies, the private sector, and farmers in Thailand and other Asian countries. \$347 100 — 36 months.

88-0021 Sesame for rice-based farming systems (the Philippines)

To enable the Central Luzon State University, Muñoz, to develop sesame varieties suitable for rice-based farming systems. \$68 500 — 60 months.

88-0022 Fish disease (the Philippines) — Phase II

To enable the Bureau of Fisheries and Aquatic Resources, Quezon City, to increase and strengthen its ability to prevent, control, diagnose, and treat diseases that cause serious losses to fish growers in the Philippines. \$204 000 — 36 months.

88-0023 Andean food processing (Peru)

For the Centro de Investigación, Educación y Desarrollo, Lima, to enable the Universidad Nacional del Altiplano, the Universidad Nacional de San Antonio Abad, the Universidad Nacional de San Agustín, and the Universidad Católica "Santa María" to develop improved techniques for harvesting, preserving, processing, and marketing crops and animal products in Andean farming communities in southern Peru. \$297 600 — 36 months.

88-0024 Food legumes (Indonesia) — Phase II

For the Agency for Agricultural Research and Development, Jakarta, to enable the Central Research Institute for Food Crops and the Bogor Research Institute for Food Crops to increase the production of food legumes to increase farm income and stability and improve nutrition. \$361 700 — 36 months.

88-0025 Alley-farming network for tropical Africa

To enable the International Institute of Tropical Agriculture, Nigeria, in collaboration with the International Livestock Centre for Africa, Ethiopia, to assist African national and international research programs to conduct on-station and on-farm research. \$250 000 — 60 months.

88-0026 Natural resource management in communal lands (Zimbabwe)

For the University of Zimbabwe, Harare, to enable the Centre for Applied Social Sciences to produce research findings of planning and policy relevance for the schemes involved, to augment community- and district-level capacity to plan and implement resource-management programs, and to provide a research context for an interdisciplinary graduate-training program in natural-resource management. \$303 740 — 24 months.

88-0027 Vegetable oil-protein system (Kenya)

To enable Egerton University, Njoro, to characterize the oil-protein system in Kenya to identify key research interventions for removing constraints to local oilseed production and processing and to use of edible oils and protein cake. \$234 100 — 9 months.

88-0028 Training project for pasture-seed production technology (eastern and southern Africa) — Phase II

To enable the International Livestock Centre for Africa, Ethiopia, to complement and strengthen the research-training activities of the Pasture Network for Eastern and Southern Africa in the area of pasture agronomy. \$51 010 — 6 months.

88-0029 Buffalo for draft power (the Philippines)

For the University of the Philippines, Los Baños, to enable the Department of Agricultural Economics to study various aspects of draft-animal power on small farms and to define future research, including the design of practical interventions. \$18 900 — 12 months.

88-0030 Fish nutrition network (Asia)

For the Agriculture, Food and Nutrition Sciences Division, IDRC, to establish a network for fish nutrition research in Asia. \$185 000 — 36 months.

88-0033 Seaweed (Chile) — Phase II

For the Universidad de Concepción to contribute to the appropriate management of natural seaweed resources in Chile as a base for expanded mariculture systems. \$10 000 — 12 months.

88-0036 Network coordinator (southern Africa)

For the Agriculture, Food and Nutrition Sciences Division, IDRC, to engage a part-time network coordinator to assist in the technical and administrative development of several Centre-funded projects in southern Africa concerned with

¹ An asterisk indicates that the contract between IDRC and the recipient institution may not yet have been signed.

introducing and evaluating multipurpose species for semi-arid and arid planting. \$29 950 — 12 months.

88-0040 Tuna (Brazil)

To enable the Superintendencia do Desenvolvimento da Pesca, Brasília, to increase tuna catches by small-scale fisheries in the northeastern region through better knowledge of the seasonality and abundance of tuna and the use of artificial attractors. \$193 800 — 24 months.

88-0043 Apples (India)

For the Management Development Institute, Haryana, to improve the postharvest handling, processing, and marketing of the apple crop in Himachal Pradesh. \$74 500 — 24 months.

88-0046 Sustainable agriculture (the Philippines)

To enable the University of the Philippines, Los Baños, to improve the quality of life of the farmers on the project site and in other regions of the Philippines through developing and applying improved, sustainable agricultural practices. \$63 000 — 36 months.

88-0049 Oysterseed (Malaysia)

For the Universiti Sains Malaysia, Pulau Pinang, to develop and operate a pilot-scale hatchery for oysters (*Crassostrea belcheri*) using existing facilities at its Muka Head Biological Station, and to develop and disseminate hatchery and remote-setting technologies appropriate to this and other mollusks in the region. \$116 000 — 36 months.

88-0053 Reorienting extension education for rural Malaysia

For the Universiti Pertanian Malaysia, Selangor, to enable the Centre for Extension and Continuing Education to develop and test a new program for training extension agents based on client and agent needs, as well as on current and projected agricultural policies and technological innovations. \$108 000 — 33 months.

88-0055 Agroindustry studies (Latin America)

For the Centro Latinoamericano de Tecnología y Educación Rural, Colombia, to prepare and implement a support program to promote and establish rural agroindustries in Latin America. \$41 400 — 12 months.

88-0056 Fish-processing enterprises (Chile)

For the Centro de Educación, Desarrollo e Investigación de la Pesca Artesanal de Chile, Valparaíso, to establish a processing enterprise in an artisanal fishing community, so as to generate employment and income. \$179 900 — 24 months.

88-0057 Inga (Central America)

To enable the Centro Agronómico Tropical de Investigación y Enseñanza, Costa Rica, to promote the incorporation of selected species of the leguminous genus *Inga* into agroforestry systems on small farms in the humid tropics of Central America. \$73 900 — 10 months.

88-0061 Rice storage (Liberia)

For the University of Liberia, Monrovia, to enable its Agronomy Department to reduce on-farm postharvest rice losses by introducing improved storage and handling systems. \$69 000 — 24 months.

88-0063 Highland sweet potato (the Philippines)

For Benguet State University, La Trinidad, to enable the Northern Philippine Root Crop Research and Training Center, in collaboration with the Kalahan Educational Foundation, to improve the production of sweet potato (*camote*) with a view to enhancing food self-sufficiency among the northern highland people and to protecting fragile mountain soils. \$73 850 — 36 months.

88-0064 Jojoba (China)

For the Academy of Sciences of China, Yunnan, to enable the Kunming Institute of Botany to introduce improved strains or provenances of jojoba and develop plantation technology for cultivation under Chinese conditions. \$73 810 — 24 months.

88-0065 Sustainable agriculture newsletter (Malaysia)

For the Asia Regional Office of the Canadian University Service Overseas, Penang, to provide a forum for information exchange and rapid feedback on important issues related to sustainable agriculture. \$20 930 — 24 months.

88-0068 Seed production mechanisms (Global)

For the Agriculture, Food and Nutrition Sciences Division, IDRC, to conduct a study of nine Centre-supported breeding projects that have, with varying degrees of success, disseminated improved planting materials to farmers. \$111 225 — 18 months.

88-0081 Eucalyptus species improvement (Chile)

To enable the Instituto Forestal, Santiago, to prepare a national research program for the genetic improvement of eucalypts of proven potential. \$25 380 — 6 months.

88-0085 Shelterbelts (Tunisia) — Phase III

For the ministère de l'Agriculture, Tunis, to enable the Institut national de la recherche agronomique de Tunisie to disseminate, as widely as possible, the techniques for installing and managing

shelterbelts in irrigated areas. \$237 900 — 36 months.

88-0092 Regional seed centre (Zimbabwe) — Phase II

For the Zimbabwe Forestry Commission, Harare, to enable the Forest Research Centre to provide eastern and southern Africa with access to sources of certified tree seed for research and development purposes by developing facilities for training as well as for processing, storage, testing, and distributing quality seed of known origin. \$411 000 — 48 months.

88-0094 Research and development alternatives (Senegal)*

For the Institut sénégalais de recherches agricoles, Dakar, to develop and test a methodology for diffusing technical innovations that is based on direct collaboration between research institute, peasant association, and training institution, with the involvement of decision-makers. \$213 800 — 36 months.

88-0098 Rattan (Papua New Guinea)

For the Ministry of Forests, Boroko, and the Papua New Guinea University of Technology, Lae, to enable their departments of Forests and Forestry to quantify the distribution of rattan resources, develop techniques for their regeneration, and identify and provide improved methods of processing and use. \$188 200 — 36 months.

88-0099 On-farm testing (Ecuador)

For the Fundación para el Desarrollo Agropecuario, Quito, in collaboration with the Instituto Nacional de Investigaciones Agropecuarias, to improve the well-being of small farmers in Bolívar province by increasing the productivity of their maize-bean system through the combined efforts of research, extension, and support institutions in the region. \$70 000 — 12 months.

88-0107 Milk-production systems (Guyana) — Phase III

For the Caribbean Agricultural Research and Development Institute, Georgetown, to develop improved systems of livestock production for the intermediate savannas and coastal areas. \$357 200 — 36 months.

88-0108 By-products network (Africa) — Phase II

For the International Livestock Centre for Africa, Ethiopia, to strengthen national agricultural research programs in Africa to carry out appropriate research and development activities on the use of agricultural by-products for animal feed. \$330 600 — 24 months.

88-0109 Lentil and chickpea improvement and mechanization (Jordan) — Phase III

For the University of Jordan, Amman, in collaboration with the Ministry of

Agriculture, to enhance food-legume production through the critical evaluation of improved technologies, their transfer to farmers, and strengthening extension and other agencies involved in food-legume improvement. \$381 200 — 36 months.

88-0110 Crop-animal systems (Indonesia) — Phase II

For the Central Research Institute for Food Crops, Bogor, in collaboration with the Central Research Institute for Animal Sciences, to develop appropriate crop-animal production systems for rainfed uplands to increase small-scale farm productivity and stability in Indonesia's transmigration areas. \$273 400 — 36 months.

88-0111 Root-crops pest management (eastern and southern Africa)

For the Commonwealth Agricultural Bureaux's International Institute of Biological Control, UK, to enable the Commonwealth Institute of Biological Control, Kenya, to assist national programs in the region to develop effective research programs on integrated pest management for root crops. \$297 100 — 24 months.

88-0113 Irrigated plantations (Senegal)*

For the Institut sénégalais de recherches agricoles, Dakar, to enable the department of forestry production research to help make the Senegal river valley self-sufficient in fuelwood and lumber, by way of irrigated plantations within the agricultural perimeters. \$148 200 — 36 months.

88-0114 Root crops (Liberia) — Phase II

For the Ministry of Agriculture, Monrovia, to enable the Central Agricultural Research Institute to increase the quantity and improve the quality of root and tuber crops. \$306 700 — 36 months.

88-0115 Rice farming systems (Burma)

For the International Rice Research Institute, the Philippines, to enable the Agriculture Corporation to strengthen the Burmese ability to conduct research on rice-based farming systems using low-input and cost-efficient technology, and to reduce field losses through improved harvesting and handling practices. \$488 400 — 36 months.

88-0116 Farming systems outreach (Global) — Phase IV

For the International Rice Research Institute, the Philippines, to assist national programs to generate technology by identifying more productive rice-based farming systems that are acceptable to small-scale farmers. \$868 000 — 36 months.

88-0117 Banana cropping systems (Uganda)

For the Ministry of Agriculture, Entebbe, in collaboration with the Rockefeller Foundation, to assist farmers to increase the productivity and profitability of their banana-based cropping systems. \$250 700 — 36 months.

88-0120 Tropical pasture evaluation (Ecuador) — Phase II*

For the Instituto Interamericano de Cooperación para la Agricultura, Quito, in collaboration with the Instituto Nacional de Investigaciones Agropecuarias, to improve animal production on small farms by developing improved pasture technologies suited to the agroecological conditions of the Ecuadorian Amazon Region. \$206 600 — 36 months.

88-0126 Rattan (Malaysia) — Phase II

For the Forest Research Institute Malaysia, Kuala Lumpur, to promote rattan cultivation by producing planting material, conserving genetic resources, and evaluating the economic aspects of intercropping systems. \$246 000 — 36 months.

88-0133 Data management (IRRI)

For the International Rice Research Institute (IRRI), the Philippines, in collaboration with the Southeast Asian Regional Center for Graduate Study and Research in Agriculture, to improve the efficiency of farming systems research by developing effective computer-based tools for data management and technology selection. \$224 200 — 36 months.

88-0134 Marine fish disease (Malaysia) — Phase II

For the Universiti Sains Malaysia, Penang, to develop practical methods to increase the fry-to-market survival of cage-cultured grouper and sea bass. \$166 000 — 24 months.

88-0135 Postproduction socio-economics (West Africa)

For the African Regional Centre for Technology (ARCT), Senegal, to strengthen the socioeconomic aspect of IDRC-supported projects in the region and to strengthen ARCT's socioeconomic capability, with a view to promoting the use of research results that are both economically viable and socially acceptable. \$363 000 — 36 months.

88-0137 Irrigation performance (Zimbabwe)

For the International Food Policy Research Institute, USA, in collaboration with the University of Zimbabwe, to develop a multidisciplinary research methodology for analyzing performance of irrigation systems and to test it on a cross-section of the major types of irrigation practice in Zimbabwe. \$197 300 — 36 months.

88-0146 Root crops (Malawi)*

For the Ministry of Agriculture, Lilongwe, to enable its Research Division to strengthen the national research program to enable it to carry out a comprehensive program on selection, testing, dissemination, agronomy, and integrated pest management for the major root crops. \$223 000 — 36 months.

88-0148 Rattan (Indonesia) — Phase II*

For the Ministry of Forestry, Bogor, and Gadjah Mada University, Yogyakarta, to enable the Agency for Forestry Research and Development and the Forest Research and Development Centre, in collaboration with the University's Faculty of Forestry and the Herbarium Bogoriense, to develop improved plantation and utilization technologies to ensure a sustained supply of rattan to meet present and future demands. \$187 500 — 36 months.

88-0151 FSR methodology application (Chile)

For the Grupo de Investigaciones Agrarias, Santiago, to develop a farming systems research (FSR) process to generate and transfer technology that meets the peasants' needs and improves their standard of living. \$192 200 — 36 months.

88-0157 Meat-handling systems (India)

To enable the Central Leather Research Institute, Madras, to determine the viability of establishing integrated rural-based systems of meat production, handling, and marketing in Andhra Pradesh, Tamil Nadu, Karnataka, and Rajasthan. \$191 700 — 18 months.

88-0162 *Prosopis* species (Argentina)

For the Instituto Argentino de Investigaciones en las Zonas Áridas, Mendoza, to exploit the naturally occurring gene pool for selection and genetic improvement of native *Prosopis* species. \$125 800 — 36 months.

88-0167 Dual-purpose cattle breeding (Venezuela)*

For the Universidad Central de Venezuela, Maracay, to enable its faculty of veterinary sciences to develop a methodology for the evaluation and genetic improvement of milked cattle in lowland tropical production systems and promote its application in Venezuela and other countries in tropical Latin America. \$239 500 — 36 months.

88-0173 Agricultural research planning (East Africa)

For the Intergovernmental Authority on Drought and Development (IGADD), Djibouti, to evaluate, appraise, and develop effective agricultural research programs in IGADD member countries. \$200 000 — 8 months.

88-0178 Indigenous trees (Mali) — Phase II*

For the ministère de l'Environnement et de l'Élevage, Bamako, to enable the Institut national de la recherche zootechnique, forestière et hydrobiologique to extend the areas occupied by three multiple-production agroforestry species after developing planting techniques and ensuring the durability of these species in natural forests. \$99 000 — 36 months.

88-0182 Women in postproduction systems (the Philippines)

For the Regional Centre for Graduate Study and Research in Agriculture, Laguna, to enable the National Post-Harvest Institute for Research and Extension, Isabela State University, and Visayas State College of Agriculture to define the postproduction environments of selected agricultural crops and to examine the status and role of different members of the farm household (especially women) in these environments. \$82 900 — 24 months.

88-0183 Crop-animal systems (Thailand) — Phase II*

For the Ministry of Agriculture and Cooperatives, Bangkok, to enable the Farming Systems Research Institute and the Khon Kaen Farming Systems Research and Development Unit to develop the methodology and technology for integrated crop-livestock research with particular reference to drought-prone areas in northeast Thailand. \$501 900 — 36 months.

88-0188 Andean pastures network (South America)

For the Pontificia Universidad Católica de Chile, Santiago, to strengthen and harmonize national research efforts aimed at increasing animal production and productivity in the highlands of South America through pasture improvement. \$438 600 — 36 months.

88-0189 Milk-production systems (Chile) — Phase II

For the Pontificia Universidad Católica de Chile, Santiago, to enable its faculty of agronomy to develop milk-production systems on the basis of a rational use of resources and to improve the socioeconomic status of the small-scale farmers of La Unión. \$428 700 — 36 months.

88-0191 Artisanal fisheries (Peru)

To enable the Instituto del Mar del Perú, Callao, and the Universidad Nacional de San Agustín, Arequipa, to increase artisanal fisheries production in three coastal communities through a project wherein the biological aspect of managing fisheries resources, the production technologies used, and the relevant

socioeconomic aspects will be evaluated and improved by a multidisciplinary research group and the fishermen themselves. \$224 500 — 24 months.

88-0193 Small ruminant-oil palm systems (Malaysia)

For the Universiti Malaya, Kuala Lumpur, to enable the Institute of Advanced Studies to develop appropriate strategies for integrating small ruminants with oil-palm production. \$344 800 — 42 months.

88-0195 Inga species (Peru)

For the Instituto Nacional de Investigación Agraria y Agroindustrial, Lima, to explore the potential of *Inga* species as components of agroforestry technologies for a range of soil types and climatic conditions in the humid tropics. \$67 380 — 12 months.

88-0208 Plantain and banana improvement (Honduras) — Phase II

For the Fundación Hondureña de Investigación Agrícola, La Lima, to develop improved disease-resistant bananas and plantains and make them available worldwide. \$562 500 — 36 months.

88-0209 Goat production systems (Mexico) — Phase II*

For the Instituto Nacional de Investigaciones Forestales y Agropecuarias, Coahuila, to develop improved goat-production systems for small-scale farmers of the states of Coahuila and Zacatecas. \$249 100 — 36 months.

88-0220 Arid zone afforestation (Peru) — Phase II

For the Instituto Nacional de Investigación Agraria y Agroindustrial, Lima, to develop reliable low-cost techniques for establishing irrigated forest plantations for forage and wood production, shelter, and erosion control on sites unsuitable for agriculture in the arid coastal lowlands. \$243 000 — 36 months.

88-0222 Soil fertility (Tanzania)*

To enable the Sokoine University of Agriculture, Morogoro, to determine means of improving and sustaining soil fertility by biological processes through proper methods of plant-residue management. \$37 400 — 36 months.

88-0223 Native fruits (Colombia)*

For the Universidad Distrital "Francisco José de Caldas," Bogotá, to enable its faculty of forest engineering to diversify agricultural production in the marginal coffee-production areas of Colombia by developing improved technology for the cultivation of native fruits such as *tulo*. \$15 100 — 18 months.

88-0224 Yam regeneration and cropping systems (Jamaica)

To enable the Inter-American Institute for Cooperation on Agriculture, Kingston, in collaboration with the Ministry of Agriculture for Jamaica, to increase the supply of yams for local consumption in the short term, as well as the quantity and quality of yams available for export on a sustained basis. \$102 800 — 12 months.

88-0234 Multi-crop dryers (Thailand) — Phase II

To enable Chiang Mai University to provide farmers and traders in northern Thailand with effective drying methods to prevent crop spoilage and add value to their produce. \$157 000 — 30 months.

88-0236 Artisanal fisheries (Colombia)

For the Instituto Nacional de los Recursos Naturales Renovables y del Ambiente, Bogotá, to promote development of two artisanal fisheries communities in the region of Santa Marta, on the Atlantic coast, through the application of an integrated model that will coordinate fisheries-resource studies; appropriate capture, handling, processing, and marketing; and community development. \$502 300 — 36 months.

88-0240 Integrated root-crops program (the Philippines)*

For the Visayas State College of Agriculture, Leyte, to introduce an integrated approach bringing together technology generation, verification, and transfer within a single program of the Philippines Root Crop Research and Training Centre, encompassing activities not only in breeding, production, and processing, but also in appropriate information and communication systems as well as training. \$1 435 000 — 36 months.

88-0253 Vegetable oil-protein system (Kenya) — Phase II

To enable Egerton University, Njoro, to develop the institutional base and coordination capacity to ensure on-going research on oil-protein systems with a view to meeting national needs in an efficient and sustainable manner. \$223 100 — 7 months.

88-0254 Cassava technology (Paraguay) — Phase II

To enable the Secretaría de Extensión Agrícola y Ganadera, Asunción, to increase the income of small-scale farmers by developing more efficient technologies and systems for production and use of cassava. \$228 800 — 36 months.

88-0261 Pond culture (Ghana)

For the Council for Scientific and Industrial Research, Accra, to enable the Institute of Aquatic Biology to develop and test systems to increase pond fish

production on Ghanaian farms.
\$187 200 — 36 months.

88-0262 Bamboo and rattan (Sri Lanka) — Phase II

For the Ministry of Lands and Land Development, Colombo, to enable the Research Division of the Forest Department to increase the production of bamboo and rattan to supply local industries and to quantify and protect natural stands. \$178 300 — 36 months.

88-0263 Pasture Network for Eastern and Southern Africa — Phase II

For the International Livestock Centre for Africa, Ethiopia, to encourage appropriate pasture research by national agriculture research systems' scientists, aimed at increasing feed availability and reducing environmental degradation, by supporting the Pasture Network for Eastern and Southern Africa. \$462 000 — 24 months.

88-0264 Banana and Plantain Network — Phase V

For the International Network for the Improvement of Banana and Plantain (INIBAP), France, to further support the establishment and operations of INIBAP. \$200 000 — 12 months.

88-0265 Fertilizer evaluation and adoption (Global)

For the International Fertilizer Development Center, USA, through farmer participation in research, to develop and evaluate appropriate fertilizer practices on-farm, and to identify constraints to wider adoption of fertilizer use by small-scale farmers. \$1 074 350 — 36 months.

88-0267 Livestock production systems (Burundi) — Phase II*

For the Ministry of Agriculture and Livestock Production, Bujumbura, to allow the Burundi Institute for Agricultural Sciences (ISABU) to improve the livestock farming systems of the small farmers in the low-altitude region of Imbo and the high-altitude areas, and to strengthen ISABU's research capability. \$328 600 — 36 months.

88-0272 Africanized bees (Colombia) — Phase II*

For the Universidad Nacional de Colombia, Medellín, to improve small-scale bee production in southwest Antioquia. \$192 700 — 36 months.

88-0281 Agroecological characterization (Global)*

For the International Center for Agricultural Research in the Dry Areas, Syria, to make available to national institutions models for the characterization of variable agroecological conditions and their impact on agricultural systems; and, in doing so, to encourage and support interinstitutional collaboration in the

application of these tools to questions of national relevance. \$413 680 — 36 months.

88-0282 Cassava and sweet potato (Rwanda) — Phase III*

For the Ministry of Agriculture, Kigali, to enable the Institut des sciences agronomiques to strengthen the national capacity for root-crop research, thereby contributing to increased food production. \$240 000 — 24 months.

88-0287 Tropical production modules (Mexico)

For the Instituto Nacional de Investigaciones Forestales y Agropecuarias, Mexico, to develop integrated agro-silvo-pastoral management systems to increase the sustainable production of food and cash products for the benefit of the small-scale farmers of the Yucatan Peninsula of Mexico. \$406 800 — 48 months.

88-0292 Poplar improvement (India)

For the Y.S. Parmar University of Horticulture and Forestry, Nauni, to develop superior fast-growing varieties of poplar suited to the Himalayan foothills of India, to meet the local population's needs for fuelwood, fodder, and small timber, and at the same time protect the nationally important watersheds. \$264 800 — 60 months.

88-0293 Forest tree culture (Egypt)*

For Alexandria University, the American University in Cairo, and the Suez Canal University, Ismailia, to provide a solution to the problem of the growing demand for trees to protect crops and human settlements as well as to meet the national need for wood, fodder, and fuel. \$521 300 — 36 months.

88-0294 Silvopasture (India) — Phase II*

For the Indian Grassland and Fodder Research Institute, Jhansi, to increase the productivity of degraded grazing lands and wastelands in semi-arid pastoral areas by interplanting fast-growing shrubs and trees with pasture legumes and grasses that have high potential for animal feed and firewood production. \$455 390 — 60 months.

88-0296 Improved crops for small-scale farmers (Chile) — Phase II

For the Universidad Austral de Chile, Valdivia, to select and develop improved varieties and production techniques for potatoes, cereals, and other crops in Chile's Region X, thereby raising small farm productivity. \$369 000 — 36 months.

88-0299 Forestry economics adviser (Southeast and East Asia)

To enable the Chaoyong Chuchart Foundation, Thailand, to develop and strengthen forestry economics as an integral discipline in forest resource

management and forest utilization research. \$76 500 — 24 months.

88-0300 Fertilizer network (West Africa) — Phase III

For the International Fertilizer Development Centre, Togo, to develop and evaluate more effective techniques of integrated fertilizer use, using cost-effective fertilizer sources tailored to various African environments and cropping systems. \$158 400 — 12 months.

88-0305 Postharvest grain systems (Tanzania)*

To enable the Uyole Agricultural Centre, Mbeye, to improve postharvest practices of smallholders for grains for home consumption and surplus in the southern highlands. \$199 100 — 36 months.

88-0306 Postharvest technology for soy bean (Thailand)*

To permit the Department of Agriculture, Bangkok, to determine and define the possibilities of improving postharvest practices and techniques to commercialize the soy bean industry in Thailand. \$83 000 — 15 months.

88-0309 Smallholder livestock development (Thailand) — Phase II

For the Kasetsart University Foundation, Bangkok, to enable Kasetsart University to develop appropriate management methods for fattening cattle on residues from baby-corn production, thereby generating increased income for smallholders. \$61 500 — 36 months.

88-0312 Seeds and plantations (Congo)*

For the Direction générale de la recherche scientifique et technique, Brazzaville, to enable the Centre d'études sur les ressources végétales to rebuild some of the ecosystems of the Mayombe Mountains by artificial regeneration of indigenous species. \$78 700 — 36 months.

88-0314 Agroforestry (Ghana)*

For the University of Science and Technology, Kumasi, to enable the Institute of Renewable Natural Resources, in collaboration with the International Council for Research in Agroforestry, to improve the productivity and sustainability of existing land-use systems by incorporating appropriate agroforestry technologies. \$123 600 — 12 months.

88-0326 Livestock production systems (Tanzania) — Phase II*

For the Tanzania Livestock Research Organization, Dar es Salaam, to enable the Livestock Production Research Institute and the Malya Research Station to develop and introduce improved production technologies for livestock in the traditional sector and to strengthen the Tanzania Livestock Research Organization. \$239 600 — 36 months.

88-0334 Aquaculture genetics (Indonesia) — Phase III*

To enable the Research Institute for Freshwater Fisheries, Bogor, to develop and apply genetic research methodologies and broodstock management strategies for deriving genetically superior strains of common carp and other species for aquaculture production. \$187 300 — 36 months.

88-0341 Root crops (Congo) — Phase III*

For the Direction générale de la recherche scientifique et technique, Loudima, to enable the Centre de recherches agronomiques de Loudima to remove the main obstacles hindering an increase in cassava production among small-scale farmers. \$155 500 — 36 months.

88-0380 Marine farms (Chile)

For the Pontificia Universidad Católica de Chile, Santiago, to enable the Departamento de Biología y Tecnología del Mar to evaluate the biological, technological, and economic parameters involved in a marine polyculture production system feasible for implementation in a small coastal lease. \$72 360 — 24 months.

88-1004 Rapeseed and mustard (India-Canada)

For the Indian Council of Agricultural Research, New Delhi, and Agriculture Canada, Saskatchewan, to improve the production and productivity of rapeseed and mustard in India by increasing yield potential, enhancing yield stability, and improving the quality of the oil and meal. \$538 000 — 48 months.

88-1016 Cucumbers (Barbados-Canada)

To enable the Barbados Agricultural Development Corporation, Christ Church, and Farmwest Management Ltd, Saskatchewan, to develop a production and marketing capability among small-scale vegetable growers in Barbados to improve farm income and family well-being. \$240 900 — 24 months.

88-1024 Plankton ecology (Chile-Canada)

For the Universidad de Concepción and Dalhousie University, Nova Scotia, to study the environmental processes (hydrological and biological) affecting the availability of plankton in the fjords of southern Chile to permit decisions on managing and expanding mariculture activities to be based on reliable estimates of the carrying capacity of the food supply. \$201 000 — 24 months.

88-1028 Monoclonal antibodies to crop viruses (ITA-Canada)*

To enable the International Institute of Tropical Agriculture (IITA), Nigeria, and Agriculture Canada, Ontario, through the

production and use of monoclonal antibodies, to provide a sound base of information on identification and distribution of viruses and their strains infecting major food crops in Africa, thereby assisting plant breeders in developing resistant cultivars. \$597 100 — 36 months.

88-1036 Lake productivity (Uganda-Canada)

To enable the Ministry of Animal Industries and Fisheries, Kampala, and the Freshwater Institute of the Department of Fisheries and Oceans, Manitoba, to predict the potential long-term fishery production of lakes Victoria and Kyoga through better understanding of lake productivity under the changing ecological conditions of the past two decades. \$109 700 — 36 months.

88-1039 Mollusk culture network (Global-Canada)

For the Lester B. Pearson Institute for International Development, Nova Scotia, to enable Dalhousie University to link into a formal network the several ongoing and proposed Centre-supported projects in mollusk culture, and to provide the network with the services of a scientific coordinator. \$249 300 — 24 months.

88-1043 Microbial control (Egypt-Canada) — Phase II*

For the National Research Centre, Cairo, and Agriculture Canada, Manitoba, to develop and introduce ecologically and economically acceptable pest-management systems based on *Bacillus thuringiensis*. \$496 900 — 36 months.

88-1048 Andean foods (Peru-Canada)

For the Centro de Investigación, Educación y Desarrollo, Lima, and the University of Manitoba, Winnipeg, to contribute to the development of improved techniques of harvesting, preservation, processing, and marketing of crops in Andean farming communities in southern Peru. \$390 400 — 36 months.

88-1051 Land reclamation (Kenya-Canada)

For Moi University, Eldoret, and the University of Toronto, Ontario, to characterize the specific environmental conditions that make the soils of semi-arid western Kenya vulnerable to erosion, so as to define and implement appropriate conservation measures and, at the same time, strengthen the research capabilities in this field at Moi University. \$379 150 — 36 months.

88-1052 Fisheries economics (Asia-Canada)

For the Asian Fisheries-Social Science Research Network (AFSSRN), the Philippines, and the Institute of Fisheries Analysis at Simon Fraser University, British Columbia, to increase the research competence and research output of the

AFSSRN, particularly in the area of capture-fisheries management. \$784 900 — 72 months.

88-1053 Fish microbiology (the Philippines-Canada)*

To enable the Southeast Asian Fisheries Development Center, Tigbauan, and Simon Fraser University, British Columbia, to assist the fish farmers and artisanal fishermen of Southeast Asia by developing methods to control epizootic ulcerative syndrome in fish and luminescent vibriosis in prawn. \$249 240 — 36 months.

Communications

88-0073 English version of "Nord-Sud" (Canada)

To enable Metavidea Associates, Quebec, to produce a television program about international development. \$50 000 — 3 months.

88-0100 Bamboo technology utilization (China) — Phase III

For the Chinese Academy of Forestry, Beijing, to enable the Subtropical Forestry Research Institute to disseminate knowledge of improved techniques for bamboo cultivation to bamboo farmers. \$44 867 — 36 months.

88-0119 Fisheries technology transfer in Latin America*

For the Pontificia Universidad Católica de Chile, Santiago, to enable the Departamento de Biología y Tecnología Marina to assist with the training and technological transfer activities carried out by the IDRC-supported projects on development of artisanal fisheries in Latin America. \$237 842 — 36 months.

88-0202 Promotion of microcomputer-based instrumentation package (Global)

For the National University of Singapore to identify strategic options to enable the use of the microcomputer-based package developed during the *Microcomputer-based instrumentation (Singapore)* project funded by the Centre, and to design and produce a set of multimedia communication materials to support the use of the package. \$100 000 — 24 months.

88-0219 Communication methodology in the eighties (Latin America)

For the Pontificia Universidad Javeriana, Colombia, to enable its Faculty of Social Communications to examine the changes that occurred in the 1980s attempting to produce a critical state-of-the-art review that will be useful both for planning research activities and decision-making in communications. \$15 084 — 10 months.

88-0258 Dissemination of ferrocement rainwater catchment system (the Philippines)*

For the Capiz Development Foundation, Roxas City, to promote the use of ferrocement rainwater catchment system technology throughout Capiz Province so as to ensure an adequate supply of potable water for the people of Capiz. \$302 500 — 60 months.

88-0289 Television series on the environment (Global)

To allow the BBC/Open University, UK, to produce a series of eight television video films on major aspects of the environment and the links between the environment and development. The series, to be produced in consultation with experts from IDRC, will constitute one element of an interfaculty course on development for students in a diploma program. \$335 000 — 12 months.

88-0408 Video for AIDS conference (Global)

To enable the Global Village Information Incorporated, Sweden, to promote better understanding of the link between human behaviour and the biomedical aspect of AIDS, particularly among the young, by providing a suitable teaching aid (video) for those working with young people. \$147 980 — 4 months.

88-1050 Training methods in video production (Global-Canada)

For the Instituto para América Latina, Peru, and Vidéo Tiers Monde, Quebec, to produce a training module based on video cassettes and a manual to allow Third World groups to use small-format video technology more efficiently to reach their objectives. \$89 628 — 12 months.

Earth and Engineering Sciences

87-1024 Sugar cane waste utilization (Cuba)

For the Centro Nacional de Investigaciones Científicas, Habana, and the University of British Columbia, Vancouver, to develop a feasible process technology to make better use of the by-products of sugar-cane processing. \$441 000 — 48 months.

88-0016 Silting of wells (West and Central Africa)

To enable the Inter-African Committee for Hydraulic Studies, Burkina Faso, to analyze the causes of silting of wells and bores in the sedimentary zone of West and Central Africa based on case studies in Cameroon and Senegal, so as to reduce, over the long run, the considerable financial cost to the states of the region of

the upkeep of such works. \$75 000 — 12 months.

88-0059 Erosion in Rufisque (Senegal)

To enable the Université Cheikh Anta Diop, Dakar, to broaden its knowledge of the functioning and dynamics of the coastal zone of Rufisque to improve the present protection solutions and eventually to propose more long-term, effective solutions. \$20 000 — 18 months.

88-0079 Process improvement in brass and bronze foundries (northern Thailand)

For Chiang Mai University to enable the Department of Industrial Engineering to improve the quality of the products of the bronze and brassware industry in northern Thailand. \$105 285 — 24 months.

88-0152 Laterite housing (Ghana)*

For the Building and Road Research Institute, Kumasi, to develop design and construction techniques for liveable and durable low-cost housing. \$203 550 — 36 months.

88-0196 Biomass roofing (India)

To enable the Development Alternatives, New Delhi, to develop a small-scale production technology for low-cost roofing sheets and other products such as ceilings and partition walls from pulp, paper, and board. \$165 600 — 24 months.

88-0286 Partially acidulated phosphate rock (Colombia)*

For Fosfatos de Colombia, Cali, to define the economic and technical feasibility of producing partially acidulated phosphate rock from local deposits by small- and medium-scale enterprises. \$216 100 — 24 months.

88-0316 Foundry capacity utilization (Turkey)

For the Small Industry Development Organization, Ankara, to enable the Foundry Development Centre to increase the capacity utilization in small- and medium-sized foundries and adjoining machine shops in Ankara. \$196 000 — 36 months.

88-0400 Manual silk reeling (India)*

For the Asian Institute for Rural Development, Bangalore, to carry out a technical and socioeconomic assessment of the recently developed manual technologies for silk reeling available to the mulberry silk reellers in India. The project will establish a systematic field test to obtain information from the users on the technical and socioeconomic relevance of the new techniques. \$55 000 — 24 months.

88-1006 Institutional support: International Division of AUCC (Global)

To enable the Association of Universities

and Colleges of Canada (AUCC), Canada, to continue to carry out its functions to increase the role and participation of the Canadian universities in international cooperation and development. \$85 120 — 12 months.

88-1012 Geotechnology (Guinea-Canada)

For the ministère des Ressources naturelles et de l'Environnement, Conakry, and Laval University, Quebec, to supply the necessary geotechnical information for developing an urban plan for the city of Conakry. \$216 000 — 18 months.

88-1015 Location of gem deposits (Sri Lanka-Canada)

For the Institute of Fundamental Studies, Kandy, and Laurentian University, Ontario, to develop scientifically based prospecting methods for small-scale miners of gemstones. \$247 184 — 24 months.

88-1017 Hydrogeology (Mali-Canada)

For the École nationale d'ingénieurs, Bamako, and the Institut national de la recherche scientifique, Quebec, to enable the Département d'étude et de recherche de géologie and the Institute to establish the vulnerability of the aquifers that provide Bamako's potable water supply to pollution from human and animal wastes and to propose simple, economically feasible solutions to the problem. \$240 000 — 24 months.

88-1018 Stone and aggregate (Rwanda-Canada)

For the Université nationale du Rwanda, Kigali, and the University of Sherbrooke, Quebec, to develop the utilization of Rwanda's natural resources in the cut stone and aggregate industry. \$320 000 — 48 months.

88-1020 Earthquake dam safety (China-Canada)

For the Central Research Institute of Building and Construction, China; the University of Alberta, Edmonton; and the University of British Columbia, Vancouver, to ensure the safety of the large hydraulic-fill tailings dams in China. \$505 600 — 36 months.

88-1021 Latin American Foundry R&D Network (Latin America-Canada)*

For the Laboratorio de Entrenamiento Multidisciplinario para la Investigación Tecnológica, Argentina, and Queen's University, Ontario, to establish a network for foundry research and development (R&D) within Latin America so as to provide effective liaison between foundry scientists, engineers, and industries, and to coordinate training, technical assistance, and small R&D project grants. \$395 625 — 36 months.

88-1022 Microprocessor-based process control for tea drying (Sri Lanka–Canada)*

For the Computer and Information Technology Council of Sri Lanka, Colombo; the National University of Singapore; and Scada Systems Incorporated, Ontario, to develop a microprocessor-based control system, based on software developed in a previous Centre-supported project, for tea drying in small-scale processing units. \$397 763 — 24 months.

88-1027 Pozzolan housing (Uganda–Canada)

For the Department of Geological Survey and Mines, Entebbe, and the University of Toronto, Ontario, to carry out research to make low-cost pozzolan houses possible by involving community participation. \$405 776 — 36 months.

88-1029 Latin American Urban Hydrogeology Network (Latin America–Canada)*

For the Association of Geoscientists for International Development, Bolivia; the Universidade de São Paulo, Brazil; the Universidad Nacional Autónoma de México; and the University of Waterloo, Ontario, to support a coordinating structure on urban hydrogeology that will allow groundwater problems affecting urban areas to be adequately characterized, relevant research projects to be coordinated, researchers to be exchanged, and links between researchers and institutions established. \$327 800 — 36 months.

88-1031 Igneous phosphate (Ethiopia–Canada)

To enable the Ethiopian Institute of Geological Surveys and the Ethiopian Institute of Agricultural Research, Addis Ababa, and the University of Guelph, Ontario, to establish the scientific basis required for improving soil productivity using local rock and mineral resources. \$86 500 — 36 months.

88-1032 Rock mulching (Ethiopia–Canada)

To enable the Ethiopian Institute of Geological Surveys and the Ethiopian Institute of Agricultural Research, Addis Ababa, and the University of Guelph, Ontario, to establish the scientific basis required for improving soil productivity using local rock and mineral resources. \$165 000 — 36 months.

88-1033 Groundwater contamination in São Paulo (Brazil–Canada) — Phase II

For the Universidade de São Paulo and the University of Waterloo, Ontario, to investigate actual and potential contamination of groundwater supplies by heavy metals and organic compounds, and

to attempt to find ways to locate, characterize, and assess the situation in contaminated areas. \$225 070 — 24 months.

88-1034 Anthocyanic pigments (Burkina Faso–Canada)

For the Université de Ouagadougou and Simon Fraser University, British Columbia, to separate and describe the anthocyanic pigments from dyer's sorghum. \$63 000 — 12 months.

88-1035 Catchment area of the Marahoué River (Côte d'Ivoire–Canada)*

For the Université nationale de Côte d'Ivoire, Abidjan, and the University of Sherbrooke, Quebec, to evaluate the water resources of a typical Sahelian hydrographic basin, to better manage the resource; the evaluation to be based on hydrogeological and geophysical data obtained in the field and from the analysis of satellite surveys by a spatial-reference information system. \$357 518 — 36 months.

88-1037 Improving living conditions in disadvantaged areas of Conakry (Guinea–Canada)

For the Université de Conakry, Guinea, and the Technical University of Nova Scotia, Halifax, to improve housing quality in the poorer districts of Conakry, and to facilitate access to the new residential areas to be created. \$352 300 — 36 months.

88-1040 Precision casting (Chile–Argentina–Canada)*

For the Universidad de Santiago de Chile; Laboratorio de Entrenamiento Multidisciplinario para la Investigación Tecnológica, La Plata; and University of Toronto, Ontario, to develop appropriate industrial techniques to permit the application of precision casting methods in Chile and Argentina, while making maximum use of local raw materials. \$243 700 — 36 months.

88-1041 Fire resistance evaluation for housing (China–Canada)*

For the Ministry of Public Security, Beijing, and the National Research Council of Canada, Ontario, to reduce the loss of life and property damage due to fire by developing fire-resistance evaluation for housing. \$344 700 — 36 months.

88-1045 Shale brick production (Egypt–Canada)*

For the General Organization for Housing, Building and Planning Research, Cairo, and the National Research Council of Canada, Ontario, to develop a small-scale technology to produce acceptable burnt bricks using shale as the basic raw material. \$387 700 — 36 months.

88-1047 Latin American chemical technology network (Latin America–Canada)

For the Companhia de Desenvolvimento Tecnológico, Brazil, and the University of British Columbia, Vancouver, to establish a chemical technology network within Latin America to coordinate training, technical assistance, small research and development grants, and pilot-plant experimentation to accelerate the process of research, development, and transfer of technology to small- and medium-scale enterprises. \$453 100 — 36 months.

88-1054 Aquifer of Managua (Nicaragua–Mexico–Canada)*

To enable the Instituto Nicaragüense de Estudios Territoriales, Managua; the Universidad Nacional Autónoma de México; and the University of Waterloo, Ontario, to help find a solution to the water-supply problem of the city of Managua. \$151 300 — 24 months.

88-1056 Groundwater management: La Plata (Argentina–Brazil–Canada)*

To enable the Universidad de la Plata and the Universidad de Buenos Aires, Argentina; the Universidade de São Paulo, Brazil; and the University of Waterloo, Ontario, to establish the suitability, both in quantity and quality, of the groundwater resources of the La Plata region for water supply. \$203 400 — 36 months.

88-1058 Cast iron production from sponge iron (Egypt–Canada)*

For the Central Metallurgical Research and Development Institute, Helwan, and the Research and Productivity Council, New Brunswick, to develop the use of locally produced sponge iron as a replacement for imported haematite and high-purity pig iron in Egyptian small- and medium-sized foundries. \$239 500 — 36 months.

88-1059 Groundwater: Cochabamba Valley (Bolivia–Brazil–Mexico–Canada)*

For the Corporación de Desarrollo de Cochabamba (CORDECO), Bolivia; the Universidade de São Paulo, Brazil; the Universidad Nacional Autónoma de México; and the University of Waterloo, Ontario, to achieve a better understanding of the groundwater system in the Valley of Cochabamba; to develop an improved model of groundwater flow and quality to maximize the water use; and to strengthen the groundwater research capabilities at CORDECO. \$207 590 — 24 months.

88-1061 Seismic micro-zoning (China–Canada)

For the Comprehensive Institute of Geotechnical Investigation and Surveys, Beijing, and the National Research Council of Canada, Ontario, to draw together the existing observational,

analytical, and engineering-properties data to develop a set of useful guidelines for siting in earthquake-prone zones. \$219 250 — 30 months.

88-1062 Tara processing (Peru—Canada)*

For the Instituto de Investigación Tecnológica Industrial y de Normas Técnicas, Lima, and Simon Fraser University, British Columbia, to develop laboratory-scale technology for production of gallic acid, pyrogallol, and propyl gallate from tara fruit and to evaluate the economics of larger scale production. \$236 900 — 24 months.

88-1065 Feasibility study for the implementation of the Johore State Technology Centre (Malaysia—Canada)*

For the Universiti Pertanian Malaysia, Serdang; the Johore State Economic Development Corporation, Johor Baharu; and the Saskatchewan Research Council and the University of Saskatchewan, Saskatoon, to evaluate the feasibility of establishing a Johore Technology Transfer Centre including the details of its working, a business plan, and a projected budget. \$79 824 — 6 months.

Executive Office

88-0203 Defence and development in Southeast Asia — Phase II

To enable the Institute of Southeast Asian Studies, Singapore, to disseminate the results of the research work at the national level through a series of national dissemination workshops, and to strengthen the collaborative research work between researchers and military officers on the sensitive issue of defence expenditure and its impact on development. \$101 900 — 12 months

Fellowships and Awards Division

88-0013 The Hague Academy of International Law scholarships (Global)

To enable the Hague Academy of International Law, the Netherlands, to assist in training young legal scholars from developing countries in aspects of international law and to offer Canadian support for training programs for legal practitioners and researchers from the Third World. \$30 000 — 12 months.

88-0017 Fellowships for human response to global change (Global)

To enable the International Federation of Institutes of Advanced Studies, Ontario, as the acting Secretariat for the Human Response to Global Change (HRGC) program, to offer fellowships to two nationals of developing countries, to

provide them with a training opportunity within the planning and implementation of the HRGC program, and, at the same time, to ensure that a Third World perspective is included in the program. \$70 000 — 18 months.

88-0041 FRIM—INTAN forestry research management training (Southeast Asia)

To enable the Forest Research Institute Malaysia (FRIM) and Institut Tadbiran Awam Negara (INTAN), Malaysia, to provide project leaders from eight AFNS-funded activities with a broad yet substantively relevant understanding of the theory and practice of research management. \$18 100 — 6 months.

88-0042 Technological transfer for timber industries (Brazil)

For the Universidade de São Paulo to enable the Instituto de Pesquisas Tecnológicas, in cooperation with the International Union of Forest Research Organizations, USA, to identify appropriate methods for transferring wood-processing knowledge and technology from laboratories to industries in South American countries and to train personnel for this purpose. \$57 485 — 6 months.

88-0044 Health services applied-research methods (Dominican Republic)

To enable the Universidad Autónoma de Santo Domingo, through an intensive training workshop in applied-research methods, to strengthen several research institutions in Central America and the Dominican Republic to improve the quality of the research proposals submitted to IDRC and other donors. \$59 711 — 6 months.

88-0045 Research projects development and analysis (West and Central Africa)

For the Institut de formation et de recherche démographiques, Cameroon, to assist researchers and students at social science research institutions in the region to formulate research projects suitable for acceptance by funding institutions. \$151 135 — 6 months.

88-0058 Use of microcomputers in health research and data analysis (eastern and southern Africa) — Phase II

For the University of Nairobi, Kenya, to enable the Department of Food Technology and Nutrition to familiarize its staff with potential applications for microcomputers in research and training and to introduce them to up-to-date data-handling techniques. \$71 992 — 6 months.

88-0096 Training course on fish reproduction techniques (Brazil) — Phase III

To enable the Centro de Pesquisas e

Treinamento em Aquicultura, São Paulo, to provide practical and theoretical training in fish reproduction, induced spawning, and larvae rearing in IDRC-sponsored fisheries projects in Latin America and the Caribbean, with a view to upgrading local research capability in freshwater fish aquaculture. \$78 710 — 6 months.

88-0097 Women's political participation (Latin America)

To enable the Centro de Investigación para la Acción Femenina, Dominican Republic, to introduce the participants to the study of research related to women's participation in social processes, particularly those related to public administration and local government. \$28 405 — 6 months.

88-0131 Consortium Graduate School (the Caribbean) — Phase IV

For the University of the West Indies, Jamaica, to continue to provide integrated institutional support to the Consortium Graduate School of the University to strengthen its teaching and research capacity. \$588 806 — 36 months.

88-0143 Research and training in rural economy (West Africa) — Phase IV

For the Université nationale de Côte d'Ivoire, Abidjan, to enable the Centre ivoirien de recherche économiques et sociales (CIRES) to reinforce the institutional support of IDRC to CIRES by creating eight study awards and two research fellowships for postgraduate students completing their doctorates in the 1988–1989 academic year. \$101 555 — 12 months.

88-0144 Farm machinery master's program (Thailand)

For Khon Kaen University to help university and government agencies to implement the national mechanization plan by supporting four of their staff in the master's degree program on farm machinery offered by the University's Department of Agricultural Engineering. \$38 740 — 30 months.

88-0145 Training of trainers for CIPS (the Philippines)

For the Philippine Partnership for the Development of Human Resources in Rural Areas, Metro Manila, to train 15 junior research-trainers from nine development-oriented nongovernmental organizations currently applying and testing the Community Information and Planning System (CIPS). \$18 920 — 12 months.

88-0149 Approaches to training women in development research (Congo)

For the Direction générale de la recherche scientifique et technique, Brazzaville, to

promote the participation of women in science and technology by teaching 40 women scientists how to formulate a research project, to define priority themes with respect to women and development, and to understand the problems related to the development of female scientific resources. \$28 058 — 3 months.

88-0150 Human resources development in fisheries research (Nepal)*

For the Fellowships and Awards Division, IDRC, to enable the National Centre for Aquaculture and Allied Training of the Department of Agriculture, Kathmandu, to train senior and junior scientists and technicians in various aspects of fisheries research for better and more efficient implementation of the country's program to develop its fisheries. \$113 200 — 40 months.

88-0176 Internship program (Global)

For the Fellowships and Awards Division, IDRC, to provide training opportunities to candidates from institutions or projects in which IDRC has an expressed commitment. \$230 000 — 24 months.

88-0206 Internship program (Global) — Phase II

For the Fellowships and Awards Division, IDRC, to allow eight interns to participate in the ongoing work of a division or regional office of IDRC over a 2-year period. \$270 000 — 24 months.

88-0229 University publishing in Latin America and the Caribbean

For the Centro Regional para el Fomento del Libro en América Latina y el Caribe, Colombia, to support the training of 19 university publishers from Latin America and Caribbean universities to develop skills in disseminating research results and planning and management for publishing. \$39 140 — 6 months.

88-0244 Research methods focusing on gender issues (eastern and southern Africa) — Phase III

To permit the Eastern and Southern Africa Management Institute, Tanzania, to continue to develop a cadre of researchers who have appropriate skills and are sensitive to gender-balanced research and to strengthen the network of researchers and development workers interested in gender-focused research. \$130 000 — 12 months.

88-0245 Training in basic principles of agro-economic analysis (Senegal)*

To enable the École nationale d'économie appliquée, Dakar, to introduce researchers in the natural sciences to the basic principles of economic analysis and to help them acquire the basic tools needed to complete such analyses. \$75 190 — 6 months.

88-0279 Management training for health-care administration (West Africa)

For the Centre africain d'études supérieures en gestion, Senegal, to use the research results of the Centre's project *Research in health management and administration* to develop a program for public-health administrators of all levels, consisting of a number of courses in management of health services for francophone Africa. \$486 600 — 36 months.

88-0313 Women in Development awards — Phase II

To enable the Social Sciences Division, IDRC, to provide support for a second set of Women in Development (WID) training awards. \$200 000 — 24 months.

88-0368 Environment and development awards (Global)

To enable the Social Sciences Division, IDRC, in collaboration with the Fellowships and Awards Division to support 10 or more students or advanced researchers to undertake or to contribute toward undertaking training projects on environment and development. \$200 000 — 24 months.

88-1003 Research management workshop (Africa-Canada)

For the University of Manitoba, Winnipeg, to enable the Department of Agricultural Economics and Farm Management to provide a group of African students completing doctoral and master's degrees in agriculture in Canada with the communications and managerial skills required to assume a research management role. \$89 800 — 6 months.

88-1005 Young Canadian researchers award program (Global)

For the Fellowships and Awards Division and the Communications Division, IDRC, to contribute to the growth of a research capacity in Canada that is responsive to Third World priorities by supporting Canadians at various stages of their academic and professional careers in research or training undertaken in a Third World country. \$570 000 — 12 months.

88-1011 Training of educational researchers (Tanzania-Canada)

To enable the University of Dar es Salaam, Tanzania, and the University of Alberta, Edmonton, to strengthen and improve the human resources of the Department of Education of the University of Dar es Salaam. \$73 200 — 48 months.

Health Sciences

88-0001 Women, water, and sanitation (Egypt) — Phase II

For the American University in Cairo to enable the Social Research Centre to

monitor and evaluate the impact of a hygiene education program and water-supply and sanitation interventions on hygiene behaviour and environmental conditions in two study villages, site of the Phase I project. \$155 980 — 20 months.

88-0037 Traditional fertility regulation (Nigeria)

For the Obafemi Awolowo University, Ile-Ife, to enable the Faculty of Health Sciences to explore the possibility of using traditional medical practitioners to promote effective family-planning programs among the rural Yoruba of southern Nigeria. \$60 768 — 24 months.

88-0051 Health impact of social development programs (Costa Rica) — Phase II

To enable the Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud, Tres Ríos, to determine the internal and external factors influencing the impact of primary health care and nutrition-supplement programs on rural communities. \$163 580 — 18 months.

88-0052 Community participation in maternal and child health, family planning, and PHC (Sri Lanka) — Phase II

For the University of Peradeniya to enhance the efficacy of rural primary health care (PHC) services by encouraging village health volunteers and community health committees and evaluating the effectiveness of this approach in the study areas. \$69 510 — 24 months.

88-0062 Evaluation of a preschool feeding program (Kenya)

For Kenyatta University, Nairobi, to enable the Department of Home Economics to characterize and evaluate current health and nutrition practices in preschool child centres, with a view to developing policy guidelines for improving the centres' operations. \$39 000 — 18 months.

88-0071 Evaluation of environmental sanitation (Brazil)

For the Universidade Federal de Bahia, Canela, to enable its Departamento de Hidráulica e Saneamento, in collaboration with the London School of Hygiene and Tropical Medicine, UK, to study the effect of environmental factors, particularly low-cost sewerage, on diarrheal diseases, intestinal nematode infestations, and nutritional status, with a view to supporting the development of public health policy. \$151 190 — 24 months.

88-0072 Water quality (Malawi)

For the University of Malawi, Zomba, to enable the Centre for Social Research, to investigate water quality and water-use patterns in rural areas and to determine what, if any, contamination occurs between the water-supply source and

consumption in the home. \$73 740 — 24 months.

88-0084 Schistosomiasis transmission (Botswana)

For the University of Botswana, Gaborone, to enable its Department of Biology to elucidate relevant aspects of the bionomics of snail intermediate hosts of *Schistosoma mansoni* for use in planning schistosomiasis control in Ngamiland. \$46 043 — 24 months.

88-0104 Integral system for recycling organic waste (Mexico)

For the Grupo de Tecnología Alternativa, Mexico, to measure the impact of a low-cost system of collecting and treating waste products (the Sistema integral de reciclamiento de desechos organicos) on community development and the factors required to keep it operating. \$239 500 — 30 months.

88-0125 Operational assessment of a national tuberculosis control program (the Philippines)

For the Philippine Tuberculosis Society, Quezon City, to identify operational problems related to case-finding and treatment activities of the Strengthened National Tuberculosis Control Program and to offer solutions to these problems. \$149 270 — 13 months.

88-0139 Problem-oriented nutrition research (Africa)

For the World Health Organization, Switzerland, to promote the development of applied nutrition research focused on local-level problems in Africa and to strengthen research capacity in West Africa. \$242 880 — 18 months.

88-0142 Applied nutrition research (East Africa) — Phase II

For the University of Nairobi, Kenya, to enable the College of Agriculture and Veterinary Sciences to train East African nutritionists in applied research methodology, thereby strengthening their ability to carry out their duties in nutrition planning and research. \$153 150 — 24 months.

88-0164 Evaluation of nutrition-education project (Jamaica) — Phase II

For the Caribbean Food and Nutrition Institute, Kingston, to conduct an interim evaluation focusing on the distribution of educational materials, the application of a monitoring tool, and the process in which materials are used. \$30 012 — 9 months.

88-0165 Impact of family planning on fertility (Kenya)*

For Kenyatta University College, Nairobi, to enable the Department of Geography to measure trends in fertility in the Chogoria area of Eastern Province and to establish the relative effectiveness of the various methods of contraception in use. \$30 600 — 18 months.

88-0168 Risk factors of cutaneous leishmaniasis (Costa Rica)

For the Universidad Nacional, Heredia, to enable the School of Veterinary Medicine to identify risk factors for the transmission of cutaneous leishmaniasis in children and quantify them through a case-control study. \$280 995 — 36 months.

88-0171 East Africa Pesticide Network

For the Kenya Medical Research Institute, Nairobi; the Tropical Pesticides Research Institute, Tanzania; and the Ministry of Labour, Uganda, to assess the health hazards posed by pesticide handling, storage, and use on agricultural estates and small farms where coffee, cotton, and other important crops are grown, with a view to developing strategies for preventing and controlling pesticide poisoning. \$852 740 — 42 months.

88-0174 Epidemiology of HIV-1 and HIV-2 (Nigeria)*

For Obafemi Awolowo University, Ile-Ife, to enable the Obafemi Awolowo University Teaching Hospital to determine annually, over 5 years, the point seroprevalence rates of infections with human immunodeficiency virus (HIV) in cluster samples drawn from urban and rural population zones. \$964 790 — 60 months.

88-0177 *Brugia malayi* (Indonesia) — Phase II

For the Ministry of Health, Jakarta, to enable the National Institute for Health Research and Development to identify the sociobehavioural factors involved in the transmission of *Brugia malayi* (filariasis) in transmigrant populations with a view to devising appropriate interventions for minimizing the disease in resettlement communities. \$91 670 — 30 months.

88-0180 PHC workshop (Costa Rica)

For the Centro Internacional de Investigación y Asesoría en Salud, San José, to permit the Asociación Internacional de Investigación y Asesoría en Salud to identify and analyze national and subregional experience in developing, implementing, and evaluating primary health care (PHC) programs to increase their efficiency and effectiveness. \$82 420 — 12 months.

88-0181 Evaluation of rural water-supply projects (Sierra Leone)

For the University of Sierra Leone, Freetown, to enable Njala University College to evaluate the efficiency and effectiveness of foreign-aided schemes to provide rural villagers with water-supply systems. \$149 260 — 30 months.

88-0190 Integrated district diagnosis and health planning (Kenya)

For the African Medical and Research Foundation, Nairobi, to facilitate the implementation of a more decentralized

process of planning, programing, and resource allocation by developing an improved but affordable health-information system applicable to East African districts. \$360 105 — 36 months.

88-0205 Health development project at Pahou: institutional capacity building (Africa)*

For the Université du Bénin, Cotonou, to enable the Faculty of Health Sciences to become a focal point for research and training relating to an all-African primary health-care initiative and to provide support for research that will fine-tune health and development activities in the Ouidah district and inspire African programs for applied health research on different subjects. \$1 522 140 — 24 months.

88-0211 Iron supplementation delivery schemes (Thailand)

For Mahidol University, Nakorn Pathom, to enable the Institute of Nutrition to study various approaches to ensuring that women receive iron supplementation during pregnancy. \$73 190 — 30 months.

88-0212 Environmental control of malaria (Nepal)*

To enable the Nepal Malaria Eradication Organisation, Kathmandu, to identify bioenvironmental methods of malaria control that are suited to local conditions and that can be implemented with community participation. \$107 231 — 30 months.

88-0213 Biological control of malaria (Peru)

For the Universidad Peruana Cayetano Heredia, Lima, to enable the Alexander von Humboldt Institute of Tropical Medicine to develop and field test a simple technique for optimal local production of *Bacillus thuringiensis* var. *israelensis* H-14 (Bti) using coconut water as a medium. \$49 425 — 18 months.

88-0214 Diagnosis of dengue (Brazil)

To enable the Fundação Oswaldo Cruz, Rio de Janeiro, to introduce and study the use of a rapid diagnostic method for dengue fever when applied in a network of national public-health laboratories. \$98 030 — 24 months.

88-0215 AIDS diagnosis (Global) — Phase II

To enable the Program for Appropriate Technology in Health, Canada, to optimize and develop an accurate, noninstrumented, inexpensive "dipstick" immunoassay to detect HIV-1 (human immunodeficiency virus) that can be used for blood screening for AIDS (acquired immune deficiency syndrome) and can be manufactured in developing countries. \$244 450 — 24 months.

88-0216 Community control of malaria (Colombia)

To enable the Corporación para Investigaciones Biológicas, Medellín, to compare three strategies for malaria control in an under-developed area, and measure their cost and efficacy against the traditional system now used by government agencies. \$248 878 — 30 months.

88-0221 Dracontiasis (Mali)

To enable the Institut national de recherche en santé publique, Bamako, to study the epidemiology of dracontiasis within a nomadic population. \$13 270 — 12 months.

88-0227 Impact of vitamin A supplementation on childhood morbidity and mortality in Ethiopia*

For Addis Ababa University to improve interventions for reducing mortality and morbidity in Ethiopian children; and to offer the opportunity to build and expand Ethiopian institutional expertise in the areas of epidemiology; program planning, conduct, and evaluation; and in biostatistics and data processing. \$961 515 — 36 months.

88-0230 Community control of acute respiratory infections (Cuba)*

To enable the Instituto de Medicina Tropical "Pedro Kouri," Habana, to obtain more complete and accurate information on acute respiratory infection morbidity and mortality, and to introduce and measure a group of health-care interventions. \$152 010 — 36 months.

88-0233 Determinants of protein-energy malnutrition (Malawi)*

For the University of Malawi, Zomba, to enable its Chancellor College to determine the prevalence of malnutrition in children aged 0-36 months. \$59 293 — 16 months.

88-0243 Participatory strategies in water supply (Costa Rica)

To enable the Fundación Tecnológica de Costa Rica, Cartago, to build on the successful community participation strategies developed in the Centre project *Hand pump technology (Costa Rica)*, and adapt these strategies to include the participation of community members as instructors in introducing and using water-supply technologies, and to investigate the application of ferrocement technology in the rehabilitation of shallow wells. \$118 760 — 12 months.

88-0246 Corneal eye infections (Nepal) — Phase II*

For Tribhuvan University, Kathmandu, to reduce the incidence of visual impairment and blindness due to corneal infections through early antibiotic therapy and community education in rural areas as a direct support to primary health care to

achieve "Health For All By 2000." \$270 340 — 48 months.

88-0247 Arsenic contamination (Chile)

For the Universidad de Chile, Santiago, to assess the level of exposure and the possible health effects attributable to arsenic in the drinking water and food of the inhabitants of small communities in an altiplano region of north-east Chile and to determine the efficacy and feasibility of a simple system to remove arsenic. \$297 000 — 24 months.

88-0251 Senegalese society and AIDS (Senegal)*

For the ministère du Plan et de la Coopération, Dakar, to enable the Bureau de recherches médicales et pharmaceutiques to study the perception and understanding of AIDS (acquired immune deficiency syndrome) among both the general population and a risk population (prostitutes) so as to increase the acceptability of AIDS-prevention measures. \$73 740 — 12 months.

88-0252 Health and nutrition in the elderly (Jamaica)

For the University of the West Indies, Kingston, to enable the Department of Social and Preventive Medicine to assess the health and nutritional status of the elderly and their relationship to various demographic and socioeconomic characteristics. \$94 180 — 24 months.

88-0255 Malaria surveillance (Brazil)

For the Universidade Federal do Rio de Janeiro to enable the Centro de Tecnologia to apply a microcomputer-based image-information system for assessing malaria in communities and to provide decision-making support for prevention and control measures. \$86 060 — 24 months.

88-0256 Japanese encephalitis (Thailand)

For the Ministry of Public Health, Bangkok, to enable the National Institute of Health, Department of Medical Sciences, Nonthaburi, to determine the immune status of children in northern Thailand to Japanese encephalitis virus. \$58 150 — 15 months.

88-0266 Community participation in dental health (the Philippines)*

For the University of the Philippines, Manila, to enable the College of Public Health to improve the dental-health status and knowledge, attitude, and practices of the urban poor, particularly children ages 2-14 years, through the development and testing of a community-managed preventive program in three selected areas of Metro Manila. \$89 600 — 36 months.

88-0270 Research in human reproduction (Global) — Phase II

For the World Health Organization (WHO), Switzerland, to provide funding

to the special program of research, development, and research training in human reproduction being carried out under the auspices of WHO. \$450 000 — 24 months.

88-0273 Hydrams (Malaysia)*

To enable the Universiti Malaya, Kuala Lumpur, to develop an appropriate hydram for use in community water-supply projects in developing countries. The hydram will be constructed from locally available materials and will be easily assembled, operated, and maintained by villagers. \$72 400 — 24 months.

88-0274 ORT-health education (Mexico)

To enable the Grupo Consultor Ciclope Sc, Mexico, to increase the use of oral rehydration therapy (ORT) in rural areas. \$167 560 — 18 months.

88-0275 Agrobased wastewater (Thailand)*

To enable the Asian Institute of Technology, Bangkok, to develop an effective technology for treatment and recycling of agrobased industrial wastewaters that is economic and applicable for use in Thailand or in a tropical region. \$132 630 — 30 months.

88-0276 Attitudes toward abortion (Cuba)

For the Ministerio de Salud Pública, Habana, to enable the Instituto Nacional de Endocrinología to identify psychosocial factors that contribute to the high abortion rate of women in Habana. \$14 030 — 12 months.

88-0288 Cervical cancer (Nicaragua)*

To enable the Ministerio de Salud Pública, Managua, to identify knowledge, attitudes, and practices of women aged 20-60 years with respect to cancer of the cervix and uterus in Managua (Region III) and to measure the incidence of acute dysplasia and cancer of the cervix or uterus in the study population. \$44 659 — 18 months.

88-0295 Improving family welfare services (India)*

For the Indian Institute of Management, Gujarat, to enable its Public Systems Group to improve the match between government family welfare programs and the community needs. \$50 200 — 24 months.

88-0298 Tuberculosis defaulters (Nicaragua)*

To enable the Centro de Investigación y Estudios de la Salud, Managua, to determine the principal factors influencing tuberculosis patients' attitudes toward treatment and proneness to irregularity and abandonment. \$54 010 — 12 months.

88-0301 Critical risk factors**(Colombia)***

To enable the Pontificia Universidad Javeriana, Bogotá, to identify controllable "critical" risk factors in acute diarrhea, acute respiratory infection, and malnutrition in children aged under 5 years in low-income communities. \$17 300 — 12 months.

88-0302 Preparation and distribution of weaning foods (Peru)*

To enable the Instituto de Investigación Nutricional, Lima, to develop nutritionally adequate and culturally acceptable preparations and food mixes for use by the mothers in community feeding centres; to determine if the distribution of these prepared foods results in an adequate frequency and amount of feeding by weaning-aged children; and to teach mothers the best way to feed their weaning-aged children, taking into account nutritional factors, availability of foods, and hygienic preparation practices. \$137 415 — 32 months.

88-0308 Sentinel site surveillance to measure health impact (Mexico)

For the Universidad Autónoma de Guerrero, Acapulco, to enable the Centre for Tropical Disease Research to implement a rapid epidemiological assessment methodology in Guerrero and to refine it for wider application in other developing countries. \$203 813 — 36 months.

88-0310 Design of a cost and management model for hospitals (Colombia)

To enable the Fundación la Previsora para la Seguridad Social, Bogotá, to contribute to the modernization of public-hospital management and to seek a solution to problems concerning labour relations and workers' benefits. \$71 950 — 6 months.

88-0321 Community participation in health promotion at the district level (Egypt)*

For the Suez Canal University, Ismailia, to enable the Faculty of Medicine to identify ways to involve the community to maximize community participation in identifying, planning, and evaluating programs for health promotion in collaboration with other sectors. \$246 922 — 18 months.

88-0323 Slum improvement (Indonesia)*

To enable the Wahana Lingkungan Hidup Indonesia, Jakarta, to develop the capability of nongovernmental organizations based in Jakarta to create an awareness and instigate appropriate action within slum communities living along the Ciliwung River so that they can improve their own environment. \$35 229 — 12 months.

88-0327 Indoor air pollution (China)*

For Shanghai Medical University to enable the Department of Environmental Health to reduce the burden of respiratory disease in Shanghai residents using coal-cake cook stoves by introducing a ventilation device to improve indoor air quality. \$134 480 — 36 months.

88-0329 Byssinosis (China)*

To enable the Guangzhou Occupational Disease Prevention and Treatment Centre, Huang Po Dong, in collaboration with the Department of Hygiene, Medical College of Guangzhou Jinan University, to determine the prevalence of byssinosis syndrome in Guangzhou and thereby provide a scientific basis for defining improved diagnostic criteria and developing appropriate control and preventive measures (including an improved dust standard) as part of an on-going surveillance program. \$114 510 — 24 months.

88-0330 Nutrition training and education (the Philippines)

For the University of the Philippines, Manila, to enable the Department of Nutrition, College of Public Health, to field test a community-based nutrition training module within the primary health care framework. \$101 000 — 24 months.

88-0340 Community water-treatment systems (Colombia)*

To enable the Universidad del Valle, Cali, to evaluate the effectiveness of community-managed, low-cost water-supply systems in Colombia and to contribute to their improvement. \$90 760 — 15 months.

88-0342 Maternal nutrition in subsistence farmers (Malawi)*

For the University of Malawi, Zomba, to enable the Department of Home Economics to identify priority areas regarding health and nutritional status of rural women to formulate relevant programs and policies. \$245 675 — 24 months.

88-0344 Message for improving rural hygiene (Nepal)*

For the Ministry of Health, Kathmandu, to improve health conditions in a rural study area. \$25 520 — 24 months.

88-0351 Occupational health (Tanzania)*

For the University of Dar es Salaam to enable the Institute of Development Studies to study a sample delivery system for occupational health care. \$13 780 — 18 months.

88-0353 MHC in Uttar Pradesh (India)*

To enable the Sanjay Gandhi Post-Graduate Institute of Medical Sciences, Lucknow, to study the pattern and usefulness of available mental health care

(MHC), to document community expectations regarding MHC, and to determine alternative patterns of MHC based on community expectations. \$42 570 — 12 months.

88-0359 Prevention of persistent diarrhea (Chile)*

To enable the Instituto de Nutrición y Tecnología de los Alimentos, Santiago, to reduce the effect of persistent diarrhea in children under 2 years of age by means of structured programs. \$66 280 — 24 months.

88-0363 Environmental epidemiology (Latin America)

To enable the Secretaría Ejecutiva Permanente del Convenio Andres Bello, Colombia, to strengthen the skills of a core group of researchers in the Andean subregion to enable national institutions to react appropriately to problems of environmental epidemiology, as well as to improve the quality of research proposals submitted to IDRC in that field. \$177 634 — 36 months.

88-0369 Community participation in health care delivery (the Philippines)*

For Saint Louis University, Baguio City, to enable its College of Nursing to develop and evaluate the effectiveness of strategies for promoting community participation in the planning and delivery of health services. \$90 930 — 24 months.

88-0372 Research in primary health care (the Philippines)*

To enable the Institute of Philippine Culture, Quezon City, to gain an understanding of the development processes and context of primary health care (PHC) and to contribute to the development of a rapid methodology of profiling a community that could be used for initiating and planning a sustainable PHC project. \$80 380 — 24 months.

88-0373 Delivery of primary health care in Cebu City (the Philippines)*

For the University of San Jose-Recoletos, Cebu City, to enable the Research Planning and Scholarship Centre to identify the predominant health problems of the urban poor in seven *barangays* in Cebu City and to analyze the appropriateness and effectiveness of primary health care services available to this population. \$104 570 — 24 months.

88-0375 Sac-sac (the Philippines)*

For Silliman University, Dumaguete City, to enable its College of Nursing to carry out a community analysis of the health needs of Sac-Sac *barangay* using a participatory methodology with a view to developing a more appropriate and effective model of community-managed primary health care. \$35 880 — 24 months.

88-0378 Adolescent sexuality education (Colombia)*

To enable the Comité Regional de Educación Sexual para América Latina y el Caribe, Bogotá, to design systematic programs for sexual and family-life education with the participation of adolescents, parents, and teachers. \$187 300 — 36 months.

88-0381 Measles immunization (the Philippines)*

For the University of the Philippines, Manila, to enable the College of Medicine, in collaboration with the Maternal and Child Health Services of the Department of Health and the Research Institute for Tropical Medicine, to determine the effectiveness of the Edmonston-Zagreb measles vaccine administered to infants at 6 months of age versus the current practice of administering Schwarz measles vaccine at 9 months of age. \$130 620 — 24 months.

88-0385 Childhood diarrheal disease (China)*

For the Tianjin Medical Institute to enable the School of Public Health to study the diarrheal disease epidemiology among children in Tianjin Ji county with the objective of evolving a relevant health-education program aimed at preventing and controlling the disease. \$79 880 — 24 months.

88-0387 Ecology of leishmaniasis (Colombia)*

For the Universidad de Antioquia, Medellín, to enable the Centro de Investigaciones Médicas to determine the prevalence of cutaneous leishmaniasis in the community of Montebello, to identify the *Leishmania* species, and to study the link between the vector species, animal reservoirs, and flora and fauna, with a view to understanding transmission of the disease and formulating recommendations for its surveillance and control. \$92 775 — 24 months.

88-0391 Evaluation of Chagas' disease control (Brazil)*

For the Universidade de Brasília to enable the Nucleo de Medicina Tropical e Nutricao to study an integrated approach to control of Chagas' disease using community participation through health education, insecticide attack, and house improvement in an endemic area of *Trypanosoma infestans* transmission. \$178 010 — 36 months.

88-0397 Schistosomiasis control: a community-based approach (Zimbabwe) — Phase II*

For the Ministry of Health, Harare, to enable the Blair Research Laboratory to evaluate an integrated, community-based control program for schistosomiasis as a component of an existing primary

health-care system. \$193 030 — 36 months.

88-0401 Sexual practices and risk factors for AIDS (Senegal)*

For Environnement et développement du Tiers Monde-SYSPRO, Dakar, to enable the Institut fondamental d'Afrique noire to participate in the study and prevention of acquired immune deficiency syndrome (AIDS) and to examine the mode of transmission in Senegal. \$42 820 — 12 months.

88-0402 Participatory evaluation of PHC (Colombia)*

To enable the Asociación Vecinos Solidarios, Bogotá, to evaluate its strategy for primary health care (PHC), with respect to its theoretical basis and its contribution to the health of the residents of *barrio Atenas* in Bogotá, and to draw up lines of action that, with the participation of the community, should strengthen the strategy's effectiveness. \$60 362 — 12 months.

88-0403 HIV transmission (Mexico)*

For the Secretaría de Salud, Mexico, to enable the Directorate of Epidemiology, to analyze the risk factors associated with heterosexual transmission of human immunodeficiency virus (HIV) among sexual partners of HIV-seropositive subjects and examine the significance of heterosexual transmission in rapidly expanding marginal urban areas. \$224 470 — 36 months.

88-0405 Condom acceptability and use (Nigeria)*

For the University of Nigeria, Nsukka, to enable the Department of Sociology and Anthropology to identify the social, religious, economic, psychological, and cultural factors that determine condom acceptance and use. \$81 420 — 27 months.

88-0409 Personal and domestic hygiene and diarrhea (Zimbabwe)*

For the Ministry of Health, Harare, to enable the Blair Research Laboratory to determine the current knowledge, attitudes, and hygienic practices related to diarrheal disease as baseline information for the introduction of specific health and hygiene education programs in a rural community. \$95 730 — 18 months.

88-1001 International health exchange program (Global) — Phase V

For the Canadian Society for Tropical Medicine and International Health, Ontario, to enable Canadian health professionals and medical students to undertake international health activities in developing countries. \$350 000 — 12 months.

88-1030 Research in health-management administration (West Africa-Canada)*

For the Centre africain d'études

supérieures en gestion, Senegal, and the University of Montreal, Quebec, to set up a department of health services management at the Centre as a means of improving national health in the francophone countries of Africa. \$595 610 — 48 months.

Information Sciences

88-0009 Translation of TECHNOnet manual into Bengali (Asia)

For TECHNOnet Asia, Singapore, to enable it and the Bangladesh Small and Cottage Industries Corporation to produce a Bengali version of TECHNOnet's Industrial Extension Manual that will serve as a guide for local extension officers to upgrading the productivity of small and cottage industries in Bangladesh. \$25 248 — 12 months.

88-0010 TROPMED museum and reference centre for mosquito-borne diseases (Southeast Asia) — Phase II

For the Southeast Asian Ministers of Education Organization's Tropical Medicine and Public Health Project (TROPMED), Thailand, to achieve a greater impact on the users in the region through networking activities and consolidation and promotion of the existing program. \$155 500 — 24 months.

88-0011 National agricultural information network (Congo)

For the ministère du Développement rural, Brazzaville, to reinforce the infrastructures in its Documentation Centre so that it can function as a central agricultural information service for the Ministry and the agencies under its guidance. \$103 279 — 36 months.

88-0014 Establishment of SISA (Africa)*

For Addis Ababa University, Ethiopia, to establish a school of information studies for Africa (SISA) offering a regional postgraduate program leading to a master's degree in information science. \$1 365 000 — 60 months.

88-0015 RESADOC (Sahel) — Phase III

For the Institut du Sahel, Mali, to enable the Réseau sahélien d'information et de documentation scientifiques et techniques (RESADOC) to complete its organization by providing it with operational structures for regional and national coordination. \$395 000 — 36 months.

88-0032 Consumer Information Resource Centre (India)

To enable the Consumer Education and Research Centre, Ahmedabad, to establish the Consumer Information Resource Centre with special emphasis on the use of

law to redress consumer grievances. \$168 700 — 36 months.

88-0034 Cooperatives data-base design (Tanzania)

For the Co-operative College, Moshi, to prepare a detailed system design for a pilot data base for agricultural cooperatives and to train the personnel necessary to implement this data base. \$95 000 — 24 months.

88-0035 Industrial information system: preliminary phase (Kenya)

For the Kenya Industrial Research and Development Institute, Nairobi, to study the country's industrial sector with a view to improving its performance through greater emphasis on research and development and information. \$76 730 — 12 months.

88-0039 Tea information services (China)

For the Chinese Academy of Agricultural Sciences, Beijing, to enable the Tea Research Institute to support the government's "Sparks" program by disseminating technology and information to tea farmers and entrepreneurs and to share China's experience and achievements with other developing countries. \$233 600 — 36 months.

88-0047 CRO library expansion (Côte d'Ivoire)

To enable the Centre de recherches océanographiques (CRO), Abidjan, to strengthen its present library by a better organization of its collection, processing, and dissemination activities. \$100 095 — 36 months.

88-0050 West Indian legislation indexing project

For the University of the West Indies, Barbados, to enable the Faculty of Law Library to produce an automated, computer-searchable data base of West Indian legislation. \$33 500 — 12 months.

88-0069 Information and documentation on public health (Senegal) — Phase II

For the ministère de la Santé publique, Dakar, to enable the Direction de la recherche, de la planification et de la formation to strengthen the documentation centre by giving it more efficient means of managing and disseminating information. \$97 000 — 30 months.

88-0070 Records management (Uganda)*

To enable the Government of Uganda, Entebbe, to host a 1-month records-management workshop aimed at promoting the effective management of records for development and public administration. \$74 000 — 6 months.

88-0083 Schistosomiasis information centre (Egypt)

For the Theodor Bilharz Research Institute, Cairo, to establish an information centre on schistosomiasis in support of research in the field by providing specialized information services, at the national and international levels, to researchers, practitioners, policymakers, and planners. \$168 000 — 24 months.

88-0087 POPIN-Afrique (Cameroon)

For the Economic Commission for Africa, Ethiopia, to enable the Institut de formation et de recherche démographiques to participate more actively in the POPIN-Afrique network and to enhance its role as subregional centre for the francophone countries of Africa. \$125 000 — 24 months.

88-0091 Information system on children (Latin America)

For the Inter-American Children's Institute, Uruguay, to assist the efforts of national child-protection agencies in Latin America to improve the quality of life and future prospects of disadvantaged and abandoned children by developing and testing a factual microcomputer-based information system on children. \$156 700 — 24 months.

88-0093 Geographic information system for Dongting Lake (China)

For the National Remote Sensing Center of China, Beijing, to enable the Laboratory of Resources and Environment Information System to collect, organize, and package environmental and socioeconomic spatially related data to improve the efficiency of decision-makers in dealing with flood-damage control and management in the Dongting Lake Region. \$234 400 — 36 months.

88-0127 Development of an industrial information service (Mali)

For the ministère de l'Industrie, de l'Hydraulique et de l'Énergie, Bamako, to enable the Direction nationale des industries to promote industrial enterprises through a more active information policy based on a better organized and equipped information service. \$110 100 — 24 months.

88-0132 Reprography group training (West Africa)

For Information Sciences Division, IDRC, to upgrade the competence of 10-15 technicians, who work mainly in institutions that have acquired reprographic material through IDRC projects, in using and maintaining micrographic equipment. \$64 000 — 9 months.

88-0140 Means of information for rural development (Cameroon) — Phase II

For the Institut africain pour le

développement économique et social, Yaoundé, to consolidate and diversify the information and popularization services already available to development agents serving young peasants in northwestern and southwestern Cameroon. \$233 000 — 24 months.

88-0160 Public enterprise evaluation by expert systems (Peru)

For the International Centre for Public Enterprises in Developing Countries, Yugoslavia, and the Corporación Nacional de Desarrollo, Peru, to increase the efficiency and effectiveness of public enterprises to ensure that they fulfill their role as instruments of national development and do not become economic liabilities. \$240 000 — 14 months.

88-0175 Standard formats for recording human rights events (Global)

For HURIDOCs (Human Rights Information and Documentation Systems) International, Norway, to allow a HURIDOCs task force to develop standard formats for enabling humanitarian and human-rights organizations to record and exchange information on individual events and cases. \$25 600 — 24 months.

88-0185 Amazon information centre (Ecuador)*

For the Ministerio de Relaciones Exteriores, Quito, to enable the Department for the Development of Frontiers and Amazon Region to support the government in a rational and orderly development of the Amazonia by providing improved access to, and dissemination of, information. \$48 415 — 24 months.

88-0187 Development and access networking experimentation and information system for Syria

To enable the Scientific Studies and Research Centre, Damascus, to develop computerized bibliographic data bases at the national level in the fields of scientific and technical information and socioeconomic information, in cooperation with existing research libraries and documentation centres. \$222 000 — 24 months.

88-0192 ISER-CGS information and documentation system (the Caribbean)

For the University of the West Indies, Jamaica, to assist its Institute of Social and Economic Research (ISER) and Consortium Graduate School (CGS) of Social Sciences in developing an information analysis system. \$244 000 — 36 months.

88-0197 Information provision for rural development (Botswana-Malawi-Tanzania)*

For the University of Botswana,

Gaborone, to enable the Department of Library Studies to carry out a task-based analysis of the skills required by an effective information provider for rural development and to draw up a suitable curriculum for such a person; to study how rural communities seek and obtain information; and to design and implement a pilot rural-information system that addresses these behaviours and patterns. \$50 465 — 24 months.

88-0199 INFIS (Indonesia) — Phase II
For the Directorate General of Fisheries, Jakarta, to upgrade the capability of the Indonesian Fisheries Information System (INFIS) network so as to optimize its efforts in organizing, processing, and disseminating fisheries information in support of activities to develop national fisheries. \$353 900 — 36 months.

88-0226 ISI statistical education video series: feasibility assessment (Global)
To enable the International Statistical Institute (ISI), the Netherlands, to determine the extent to which video-based instructional techniques, now available in developed countries, can be used in statistical education and training in developing countries by evaluating the effectiveness of an existing video-cassette course in basic statistical methods in selected developing countries. \$73 400 — 12 months.

88-0235 Strengthening the industrial information service of SONEPI (Senegal)
To enable the Société nationale d'études et de promotion industrielle (SONEPI), Dakar, to support the development of small- and medium-sized industries by providing the Industrial Information Service of SONEPI with the means to improve the collection, processing, storage, and dissemination of industrial and technological information. \$180 980 — 36 months.

88-0238 Poisons information pilot centre (Uruguay)
For the Universidad de la República, Montevideo, to enable the Centro de Información y Asesoramiento Toxicológico to enhance its information capabilities and to participate fully in the *Poisons Information Package for Developing Countries* project, coordinated by the International Program on Chemical Safety as the regional pilot centre for Spanish-speaking Latin America and the Caribbean. \$152 400 — 24 months.

88-0241 Regional information system on food technology (Africa) — Phase II
For the Centre régional africain de technologie, Senegal, to develop mechanisms of exchange and dissemination of information on food technologies in Africa and to put in place

methods of efficiently transmitting this information to end users. \$285 700 — 36 months.

88-0242 Rural technology information service (India)*
For the Institute of Engineering and Rural Technology, Allahabad, to enable the Centre for Development of Rural Technology to strengthen its information capabilities to improve and expand its services to users in India. \$85 545 — 36 months.

88-0248 Information system for juvenile courts (Colombia)
For the Instituto SER de Investigación, Bogotá, to contribute to the improvement of the processing, storage, analysis, flow, and exchange of vital information necessary for expedient and rapid administration of justice for juveniles in Colombia. \$94 100 — 18 months.

88-0257 Soil management information services (Global)
For the International Board for Soil Research and Management, Thailand, to disseminate information on soil management among national agricultural research systems to help increase food and agricultural production. \$351 900 — 36 months.

88-0269 Bihar: an evaluation of change (India)
For the University of Delhi to enable the Kirori Mal College to demonstrate the relevance of digital mapping techniques for analyzing spatially related data and to create a comprehensive geographic information system for Bihar to fulfill the mapping needs of the Centre for Policy Research and the Planning Commission for evaluating socioeconomic change in Bihar. \$103 450 — 24 months.

88-0280 MINISIS resource centre: India
To enable the Shreemati Nathibai Damodar Thackersey Women's University, Bombay, to establish a MINISIS Resource Centre to provide better and more direct service to local users of MINISIS (Interactive Minicomputer System for Information Retrieval and Library Management). \$174 340 — 36 months.

88-0285 Pilot cattle information system (Egypt)*
For Cairo University to enable its College of Agriculture to help design and develop a national cattle-improvement program for Egypt, capable of collecting, processing, storing, and distributing the information needed to identify and select superior producing animals as well as to improve management in the enrolled herds. \$179 300 — 36 months.

88-0303 DISC (Asia and the Pacific) — Phase III
To enable the International Centre for

Diarrhoeal Disease Research, Bangladesh, to complete the consolidation of the activities of the Diarrhoeal Disease Information Service and Documentation Centre (DISC) begun in the previous phase to ensure their long-term viability. \$132 150 — 24 months.

88-0304 Industrial development information service (Somalia)*
To enable the Ministry of Industry and Commerce, Mogadishu, to strengthen its industrial information service to enable it to establish a technical information service for manufacturing enterprises and to enhance its publishing capabilities. \$205 200 — 24 months.

88-0307 Mapping trypanosomiasis epidemiology (Kenya)
For the Kenya Trypanosomiasis Research Institute, Kikuyu, to update and consolidate knowledge on the distribution of tsetse and other fly vectors and the diseases that they transmit to humans and livestock and to make available information that could be used in the rational reclamation of tsetse-infested lands. \$125 400 — 30 months.

88-0317 Philippines upland research*
For the University of the Philippines at Los Baños to enable the Institute of Environment Sciences and Management to construct a profile of research on the uplands; to develop a system for classifying upland-related research with respect to classifications used in Southeast Asia and Asia-Pacific; and to develop a computer-based compilation with annotated bibliography and sourcing index for Philippine uplands research. \$10 000 — 15 months.

88-0318 REDUC network: management and technology support (Latin America)
To enable the Centro de Investigación y Desarrollo de la Educación, Chile, to reorganize, strengthen, and extend support provided to participants in the Latin American Network of Documentation in Education (REDUC) to ensure that the network is up-to-date with respect to recent developments in the areas of technology and management, and is better able to respond to the increasing demands of its users. \$240 000 — 24 months.

88-0320 Pilot training program for Arab agricultural documentalists (Africa)
For the Arab Organization for Agricultural Development, Sudan, to develop an effective training program and refresher courses in standard documentation methods for agricultural documentalists, with a view to facilitating the exchange of agricultural information and the ultimate development of the Arab Information System Network. \$145 200 — 36 months.

88-0324 Information for planning and research (Togo) — Phase II

For the ministère du Plan et des Mines, Lomé, to enable the Centre for Technical Documentation to computerize and expand its documentation operations, thus increasing its impact and preparing its role as coordinator of the future national information network. \$163 000 — 36 months.

88-0338 Documentation and information system: ARCEDEM (Africa)

To enable the African Regional Centre for Engineering Design and Manufacturing (ARCEDEM), Nigeria, to develop a fully operational documentation centre for keeping member states up-to-date on technological progress through the national centres and other industrial establishments in the region. \$192 500 — 24 months.

88-0339 Ferrocement information network activities for rural development (Asia)*

For the Asian Institute of Technology, Thailand, to enable its International Ferrocement Information Centre and the Library and Regional Information Centre to enhance the outreach programs of the Ferrocement Information Network so that their services and output reach the greatest possible number of users in Asia. \$194 100 — 36 months.

88-0347 MINISIS resource centre: West Africa

To enable the African Intellectual Property Organization, Cameroon, to establish a MINISIS Resource Centre that will be responsible for actively promoting MINISIS (Interactive Minicomputer System for Information Retrieval and Library Management) and training and supporting its new and existing users in the region. \$224 380 — 36 months.

88-0354 Documentation and information system on transportation (Senegal)*

For the ministère de l'Équipement, Dakar, to enable its Direction des études et de la programmation to establish a coordination centre for the documentary component of a documentation and information system for transport. \$101 790 — 24 months.

88-0356 National scientific and technological information network (Ghana)*

To enable the Council for Scientific and Industrial Research, Accra, to establish a sustainable national system for identifying, collecting, storing, retrieving, repackaging, and timely dissemination of scientific and technological information to research scientists, government planners and policymakers, public and private industries and manufacturers, and rural

peasant farmers, and cottage industries. \$220 100 — 24 months.

88-0357 Communicating low-cost building techniques (India)*

To enable the Communication Centre of Scientific Knowledge for Self-Reliance, France, to produce five information packages on roof construction using local resources (skills and materials) according to climatic conditions. \$55 100 — 12 months.

88-0361 National agricultural information system (Burkina Faso) — Phase II*

For the ministère de l'Agriculture et de l'Élevage, Ouagadougou, to enable the Centre national de documentation agricole (CNDA) to strengthen the country's national agricultural information system, by computerizing CNDA's bibliographic data capture and by strengthening some of the system's components. \$141 400 — 24 months.

88-0371 FAMESA manual on science, technology, and management information systems (Africa)

To enable the International Centre of Insect Physiology and Ecology, Kenya, to develop a manual on integrated information systems aimed at research administrators and managers of research and development institutes. \$201 800 — 30 months.

88-0390 Bamboo information centre (India)*

To enable the Kerala Forestry Research Institute, Peechi, to establish a bamboo information centre concentrating on organizing and disseminating Indian research data. \$119 000 — 36 months.

88-0411 Information-communication system for rural communities (the Philippines)*

To enable the International Institute for Rural Reconstruction, Cavite, to test a set of strategies that employs appropriate two-way communication channels for identifying and delivering relevant information on development to poor rural families in the Philippines. \$199 000 — 36 months.

88-1009 Written languages of China (China-Canada)

For the Institute of Nationality Studies, Beijing, and Laval University, Quebec, to enable the Chinese Academy of Social Sciences and the International Centre for Research on Bilingualism to provide the Chinese government with the necessary scientific information to formulate and implement a language-planning policy. \$230 000 — 24 months.

88-1010 Teaching documentary data processing (Morocco-Senegal-Canada)*

For the École des sciences de

l'information, Morocco; Université Cheikh Anta Diop, Senegal; and the University of Montreal, Quebec, to improve the quality of data-processing training for librarians, archivists, and documentalists in their respective institutions and to lay the foundation for a permanent program for cooperation and exchange between them. \$349 000 — 36 months.

88-1038 Industrial information and communication (CARIRI-Canada)*

To enable the Caribbean Industrial Research Institute (CARIRI), Trinidad and Tobago, and the Centre for Industrial Research of Quebec, St Foy, to enhance CARIRI's ability to promote the use and application of technical and industrial information to solve technical and managerial problems and to establish the infrastructure for an industrial information extension service capable of ongoing identification of the changing technical needs of small- and medium-sized industries. \$221 420 — 24 months.

Social Sciences

88-0002 Manufacturing sector studies (Kenya) — Phase II

For the University of Nairobi to enable its Department of Economics to gather information on the aspects of Kenyan industry not covered in Phase I, to examine wholesale- and retail-marketing practices and freight charges by sea and air, and to explore the potential for increasing trade offered by the Preferential Trade Area for Eastern and Southern Africa. \$46 000 — 12 months.

88-0005 Technology in the vegetable-oils industry (Nigeria)

For Ahmadu Bello University, Zaria, to explore ways of revitalizing Nigeria's vegetable-oils industry. \$32 960 — 18 months.

88-0006 Economic policy options (Costa Rica)

For the Instituto Centroamericano de Administración de Empresas, Alajuela, to develop a general equilibrium model of the Costa Rican economy suitable for use in policy analysis. \$99 040 — 12 months.

88-0031 Contraceptive continuation and discontinuation (the Gambia)

To enable the Gambia Family Planning Association, Banjul, to understand the various factors associated with contraceptive acceptance and use among clinic clients. \$63 100 — 26 months.

88-0048 Infanticide and baby dumping (Zimbabwe)

For the Committee for Abandoned Babies, Harare, to collect data on the social and economic background of women charged

with infanticide and baby dumping, to examine the circumstances surrounding the offenses, and to explore how preventive educational and other rehabilitation programs might reach vulnerable women. \$99 200 — 18 months.

88-0054 Success and failure in the timber industry (Cameroon)

To enable the École supérieure des sciences économiques et commerciales, Douala, to study the factors explaining the success or failure of the small-scale logging industry and sawmills in Cameroon to propose solutions to political decision-makers. \$24 300 — 24 months.

88-0060 Ethics, beliefs, and attitudes toward family planning (Kenya)

For the University of Nairobi to consider a dimension that is typically missing in the study of family planning, that is, people's moral and ethical beliefs and the ways in which these influence their acceptance or nonacceptance of family-planning programs. \$23 700 — 12 months.

88-0066 Public-private sector balance (Global)

For the Organisation for Economic Cooperation and Development, France, to study the changing roles of the public and private sectors, with particular reference to Argentina, Bolivia, Cameroon, and Ghana. \$76 780 — 15 months.

88-0067 Natural resource use and technology diffusion in rural Mexico

To enable the Grupo Interdisciplinario de Tecnología Rural Apropiada, Mexico, to examine the pattern of use of natural resources (wood and water) and the diffusion of technology (cook stoves and water-collection devices) in a rural community (Cheranatzicurin), with a view to improving policies and programs for rural development. \$149 150 — 24 months.

88-0074 Cooperatives (Burkina Faso)

For the Université de Ouagadougou to enable the Centre d'études, de documentation, de recherche économique et sociale (CEDRES) to analyze the potential role of three types of cooperative institution — village groups, agricultural cooperatives, and savings and credit banks — in rural development, and to reinforce the research and training capacity of CEDRES. \$103 000 — 36 months.

88-0075 Food-policy reform (Nicaragua)*

For the Universidad Centroamericana, Managua, to undertake a comparative analysis of the economic and political conditions that prompted food-policy reforms in selected socialist countries during the 1980s, with an in-depth analysis of the impact of such reforms on Nicaragua. \$30 910 — 24 months.

88-0076 Resource allocation, ethnicity, and education (Sri Lanka)

For the International Centre for Ethnic Studies, Colombo, to identify policy recommendations for allocating education resources in Central Province so as to improve ethnic relations. \$45 800 — 12 months.

88-0077 Financial markets and inflation (Argentina) — Phase IV

For the Centro de Estudios de Estado y Sociedad, Buenos Aires, to analyze and evaluate the impact of the Austral Plan on savings, investment, and finance. \$138 350 — 24 months.

88-0078 Political culture and the state in Central America

To enable the Universidad de Costa Rica, San José, to identify research issues and priorities for the Central American Master's Program in Sociology in two areas: political culture in Central America and the changing role of the state in Central America. \$40 000 — 12 months.

88-0080 Business associations and public policy in Central America

For the Facultad Latinoamericana de Ciencias Sociales, Costa Rica, to describe and analyze the evolution, structure, and function of business associations in Central America. \$28 000 — 6 months.

88-0082 Inventory of environmental research and development activities (Nigeria)*

For the Nigerian Environmental Study Team, Ibadan, to initiate the process of formulating a policy on environmental research and development and a plan of action for Nigeria. \$66 920 — 18 months.

88-0086 Child-to-child (India)

For the Aga Khan Foundation, Switzerland, to describe the implementation process involved in each of the seven Foundation-sponsored child-to-child pilot projects in India, and to evaluate the impact of each. \$67 000 — 24 months.

88-0088 Princes and counsellors: the role of technicians in forming policy decisions (Chile)

For the Instituto Latinoamericano de Estudios Transnacionales, Santiago, to examine the role of technocrats in managing state apparatus and in formulating national social policies. \$107 360 — 24 months.

88-0089 Small industrial development (Thailand)

For the Economic Society of Thailand, Bangkok, to enable Thammasat University to examine small-scale industries with particular reference to the role they play in regional development and the promotion of exports. \$68 500 — 24 months.

88-0090 Producer services (Malaysia)

For the Universiti Malaya, Kuala Lumpur, to enable its Faculty of Economics and Administration to provide new and useful data on service producers for government planners, decision-makers in service industries, and researchers. \$72 000 — 24 months.

88-0095 Regional industrialization (Malaysia)

For the Universiti Malaya, Kuala Lumpur, to enable its Faculty of Economics and Administration to examine several development issues deemed important by policy planners for enhancing the development of small-scale industries. \$61 000 — 18 months.

88-0105 Liberalization of agricultural marketing (Nigeria)*

For the University of Ibadan to enable the Department of Economics to examine the impact of liberalization policy on Nigeria's agricultural marketing and pricing system and hence the ability of the system to meet the needs of small-scale farmers effectively and efficiently. \$91 210 — 24 months.

88-0106 Food-marketing policy (eastern and southern Africa)

For the University of Oxford, UK, to enable the International Development Centre to analyze the impact of liberalizing food markets in eastern and southern Africa and obstacles to implementing various policy reforms. \$86 700 — 24 months.

88-0112 Macroeconomic research (Brazil) — Phase IV

For the Pontificia Universidade Católica, Rio de Janeiro, to analyze the effects of alternative macroeconomic policies, particularly those designed to cope with the public-sector deficit, under distinct scenarios in the medium and long run. \$139 300 — 24 months.

88-0118 Demographic projections: 1985–2010 (Colombia)

For the Departamento Administrativo Nacional de Estadística, Bogotá, to compile census data and demographic estimates for 1951–1985 so as to evaluate vital statistics and make projections of the future population structure of the country. \$13 360 — 5 months.

88-0121 Technical support services to the Group of Twenty-four (Global)*

For the United Nations Conference on Trade and Development, Switzerland, to assist developing countries by providing technical briefings and studies on international issues that are currently under negotiation or will come up for decision at a later stage in discussions of the Interim Committee of the International Monetary Fund (IMF) and of the Joint Development Committee of the IMF and

the International Bank for Reconstruction and Development and in other bodies. \$236 890 — 26 months.

88-0123 Urban energy consumption and air-pollution network (Asia)

For Tsing Hua University, China; the University of Hong Kong; the Systems Research Institute, India; the University of the Philippines; and Chulalongkorn University, Thailand, to develop a better understanding of patterns of household energy consumption in the context of urbanization in south and southeast Asia and to explore the links between such patterns and exposure to air pollution in several cities in the region. \$445 130 — 24 months.

88-0124 Regional development and indigenous minorities in Southeast Asia*

For the Universiti Malaya, Kuala Lumpur; the Thai University Research Institute, Bangkok; the Mountain People's Culture and Development Centre, Thailand; and the Montanosa Research and Development Centre, the Philippines, to study the impact of regional development programs on indigenous minorities in Thailand, Malaysia, and the Philippines. \$258 800 — 24 months.

88-0128 Technical education and employment (India)

For the Gujarat Research Society, Bombay, to continue work on the relationship between technical education and employment with emphasis on determining the utility of the technical training received by women at industrial training institutes and on preparing guidelines for its improvement. \$43 000 — 14 months.

88-0136 Adapting the Montessori approach to preprimary education (the Philippines)

For the Zonta International Club and the Bicol Institute of Development Technology, Metro Manila, to examine the effectiveness of a Montessori approach to preschool education in the context of poverty as well as the impact of an adapted Montessori system upon teachers, parents, and community leaders. \$61 000 — 12 months.

88-0141 Urban housing strategies (Lesotho)*

For the National University of Lesotho, Roma, to enable the Institute of Extramural Studies to examine the housing conditions of female-headed households and make recommendations for their improvement. \$15 460 — 16 months.

88-0147 SPSS training (West and Central Africa)

For the Direction de la statistique, Senegal, to offer short-term training in the use of the statistical package for the social sciences (SPSS) microcomputer software

to researchers working on IDRC-funded projects. \$132 387 — 3 months.

88-0153 Labour market participation (Paraguay)

For the Centro Paraguayo de Estudios Sociológicos, Asunción, to enable the Grupo de Estudios de la Mujer Paraguaya to develop a profile of women workers. \$77 230 — 18 months.

88-0156 Popular housing and community development (Peru)

For the Centro de Estudios para el Desarrollo Regional, Arequipa, to stimulate community self-help among the inhabitants of the unserviced squatter settlement known as Cono Norte, to allow them to finance, organize, and build their homes through mutual assistance. \$108 400 — 24 months.

88-0158 Drought and famine survival strategies (Sudan)*

To enable the Economic and Social Research Council, Khartoum, to identify household responses to drought in 10 pastoral and 10 agricultural communities in Darfur Province and to assess the impact of these responses on households' general resistance to drought in the future. \$62 200 — 18 months.

88-0159 Diagnosis of technical school graduates (Ecuador)

To enable the Instituto de Investigaciones Socio-Económicas y Tecnológicas, Quito, to carry out a quantitative and qualitative diagnosis of the situation that graduates from the agricultural and industrial streams of technical high schools have faced over the past 5 years. \$78 600 — 18 months.

88-0161 Integration of women into industrial development (Kenya)

For the Centre for Action Research, Nairobi, to develop a research methodology and a set of instruments to examine the extent and nature of female employment in the agroindustrial sector of the economy. \$14 400 — 12 months.

88-0163 Small associative businesses (Peru)

For the Instituto Peruano de Empresas de Propiedad Exclusiva de Trabajadores, Lima, to study the feasibility of setting up small, community-managed industrial enterprises in Villa El Salvador, a community south of Lima. \$23 800 — 12 months.

88-0166 Integrated community-based rural education (Mexico)

For the Centro de Estudios Educativos, Mexico, to design, implement, and assess an integrated community-education program to overcome the negative effects of school failure and to increase the relevance of basic education in rural areas. \$190 000 — 34 months.

88-0169 Development strategies for the remote areas (Nepal)*

For Tribhuvan University, Kathmandu, to enable the Research Centre for Nepal and Asian Studies to delineate appropriate short- and medium-term strategies for the development of the remote areas. \$183 800 — 24 months.

88-0170 School-based teacher training and support (Indonesia)

For the Ministry of Education and Culture, Jakarta, to enable the Office of Educational and Cultural Research and Development to investigate the implementation, impact, and dissemination of the professional support system in primary schools in some replication areas. \$215 000 — 27 months.

88-0172 Self-medication among the urban poor (Peru)

To enable the Centro Latinoamericano de Trabajo Social, Lima, to develop a methodology suitable for the study of health consultations occurring in pharmacies in popular *barrios* of Lima, to generate knowledge about the implications of such consultations, and to prepare public health-policy recommendations. \$38 500 — 12 months.

88-0179 Social relations and economic conditions of rural women (India)

For the Centre for Social Research, New Delhi, to analyze critically the socio-structural changes in rural households in the process of development. \$85 960 — 24 months.

88-0186 Occupational health and rural community education (Peru)

For the Huayuna Instituto de Promoción y Desarrollo, Lima, to investigate the toxic effects of exposure to pesticides and defoliants on persons in agricultural occupations in Peru and to evaluate changes that may be brought about by education and by creation of an epidemiological monitoring system. \$200 000 — 48 months.

88-0198 Utilization of social sciences research (Latin America)

For the Facultad Latinoamericana de Ciencias Sociales, Chile, to carry out a series of case studies and research-supporting activities that will aid understanding of the process of using knowledge produced by social research, and to identify initiatives to promote its wider use. \$235 000 — 36 months.

88-0200 Women and Natural Resource Management Network (Africa)

For the Environment Liaison Centre, Kenya, to highlight women's knowledge about the environment by providing support for a set of studies on women and

natural resource management in Africa. \$753 100 — 36 months.

88-0204 National languages policies in education systems (Burkina Faso—Côte d'Ivoire—Guinea—Mali—Mauritania—Senegal)*

For the ministère de l'Enseignement de base et de l'Alphabétisation de masse, Burkina Faso; the Université d'Abidjan, Côte d'Ivoire; the département de l'Éducation nationale, Guinea; the ministère de l'Éducation nationale, Mali; the ministère de l'Éducation nationale, Mauritania; and the Université de Dakar, Senegal, to evaluate the policy on use of national languages of each country's education system, to propose new strategies for these national languages, and to produce a comparative synthesis. \$394 900 — 24 months.

88-0210 Posthurricane rehabilitation (Jamaica)

For the University of the West Indies, Mona, to replace equipment originally obtained through Centre grants and damaged by Hurricane Gilbert and to fund about six urgently needed research endeavours dealing with problems resulting from the hurricane in the areas of agriculture, nutrition, and the social sciences. \$675 000 — 24 months.

88-0218 Education and social structure (Chile) — Phase IV

To enable the Programa Interdisciplinario de Investigaciones en Educación, Santiago, to undertake a research program involving social actors such as teachers and parents to study aspects of school system administration that influence social participation. \$143 000 — 18 months.

88-0225 Community power (Nicaragua)*

To enable the Instituto de Investigaciones Económicas y Sociales, Managua, to assess the effectiveness of the Sandinista Defence Committees as organizations in charge of responding to people's needs and as actors involved in policy-making and in implementing development policy. \$54 750 — 24 months.

88-0237 Industrial restructuring (Uruguay) — Phase II

To enable the Centro de Investigaciones Económicas, Montevideo, to design and evaluate the main options for industrial strategy and alternative policies, with a view to assessing their impact on the most relevant variables for the economic development of the country. \$180 430 — 24 months.

88-0249 Institutional support for CODESRIA (Africa) — Phase V
For the Council for the Development of Economic and Social Research in Africa (CODESRIA), Senegal, to carry out several activities to support fundamental

and problem-oriented social science research in Africa and to strengthen CODESRIA as an institution capable of carrying out such activities in the future. \$1 016 330 — 36 months.

88-0250 Rural industrialization in Asia

To enable Kasetsart University, Thailand; the Universiti Pertanian Malaysia; and the Mahaweli Authority of Sri Lanka to measure the supply of, and demand for, nonagricultural labour in specified regional development areas in south and southeast Asia, with a view to matching this labour with the resource endowments of these locations as well as the potential demand for goods. \$239 000 — 24 months.

88-0259 Network support for Thai qualitative research*

For Chulalongkorn University, Bangkok, to strengthen the capacity of the Thai Association of Qualitative Researchers to effectively provide qualitative research training and promote the use of such methodology in community-development related research. \$166 000 — 30 months.

88-0277 Natural disasters and high-risk zones in Central America

For the Consejo Superior Universitario Centroamericano, Costa Rica, to develop adequate methods of prevention to confront the natural disasters common to the Central American region. \$289 200 — 17 months.

88-0278 Educational efficiency and the teaching-learning process (Costa Rica)

For the Universidad de Costa Rica, San José, to enable the Instituto de Investigación para el Mejoramiento de la Educación Costarricense to examine the factors determining the efficiency of the teaching-learning process to develop a program for improving the quality of education in marginal urban areas in Costa Rica and other Central American countries. \$72 500 — 36 months.

88-0297 Workers' education and union participation (Chile)

To enable the Centro de Estudios Sociales, Santiago, to examine various experiences in union education carried out in Chile over the last 10 years to assess their relevance to adult education and to explore their correspondence with the objectives of workers' organizations. \$55 000 — 18 months.

88-0311 Economic participation and migration (Nepal)*

To enable the Center for Women in Development, Kathmandu, to assess the impact of migration on the economic participation of women and on overall national development. \$84 500 — 18 months.

88-0315 Rural income and employment (Botswana)*

For the University of Botswana, Gaborone, to enable the Department of Economics to facilitate diversification and growth of the rural economy through better understanding of the impact of the range of policies affecting rural income flows. \$50 600 — 18 months.

88-0319 Forest exploitation and the environment (Uruguay)

For the Centro Interdisciplinario de Estudios sobre el Desarrollo, Montevideo, to investigate alternative uses of Uruguay's natural resources and their environmental impact and the range of technical, social, and political factors that determine how such resources are managed. \$100 950 — 20 months.

88-0322 Land, law, and policy in Uganda*

For Makerere University, Kampala, to enable the Makerere Institute of Social Research and the Faculty of Law to examine the limitations of the system of state land control in Uganda under the Land Reform Law of 1975. \$134 400 — 36 months.

88-0325 Urban agriculture in Kampala (Uganda)*

For Makerere University, Kampala, to enable the Makerere Institute of Social Research and the Department of Agricultural Economics to learn how urban agricultural activity in Kampala is organized. \$4 800 — 12 months.

88-0328 Unregulated urban housing submarkets (Kenya)*

For the University of Nairobi to enable the Department of Land Development to document the market organization and operation of housing submarkets in three urban centres; to analyze the evolution of new land-holding systems and tenure forms in unplanned settlements; to develop a methodology for forecasting the growth of uncontrolled settlements and the development of housing submarkets; and to propose policy guidelines for improved housing strategies for the urban poor. \$112 200 — 24 months.

88-0331 Formulation of a medium-term plan for technology development (Malaysia)*

To enable the Ministry of Science, Technology and Environment, Kuala Lumpur, to review current science and technology policy and recommend a new long-term science and technology plan for the nation. \$218 370 — 18 months.

88-0332 Artisanal fisheries (Kenya) — Phase II

For the University of Nairobi to study the artisanal and commercial sectors of Lake Victoria fishery as parallel activities and to test the hypothesis that, with suitable

technological and institutional intervention, the artisanal sector can not only survive the threat from the commercial sector, but also improve the living conditions of those working in it, absorb a greater labour force, and compete favourably with the emerging commercial, export-oriented sector. \$80 000 — 36 months.

88-0333 Research and training in population and development (Egypt) — Phase V

To enable the Population Council, USA, to identify and analyze the problems of development in the Middle East that are related to population issues and to identify and strengthen individual, institutional, and national capacity in research on population and development. \$230 900 — 24 months.

88-0335 Teaching and learning in Aymara urban schools (Bolivia)

For the Centro Boliviano de Investigación y Acción Educativas, La Pas, to examine teaching and learning practices in urban Aymara schools so as to identify and assess those variables that hinder or enhance the capacity of bilingual children to learn to read and write. \$102 700 — 30 months.

88-0336 Microenterprise promotion in secondary schools (Thailand)

For the Office of the National Education Commission, Bangkok, to enable its Research Division to explore and develop an appropriate training model for the promotion of microenterprises in secondary schools so as to help students to become self-employed. \$177 700 — 45 months.

88-0345 Small-scale enterprise sector (Uganda)*

For the Ministry of Planning and Economic Development, Kampala, to enable the National Research Council to study the small-scale economic sector in the urban economy of Uganda, and to recommend to the relevant government authorities how to improve the performance of this sector and enhance its contribution to building an integrated, self-sustaining, independent national economy. \$75 000 — 16 months.

88-0346 Resettlement of displaced populations in the commune of Tombouctou (Mali)*

To enable the Municipalité de Tombouctou to assist rural reconstruction by contributing to the conservation of the environment and to food self-sufficiency and by giving direction to the policy of settling nomads and defining more precisely and realistically the struggle against desertification. \$156 400 — 12 months.

88-0348 Urban management (Nigeria)*

To enable the Nigerian Institute of Social and Economic Research, Ibadan, to assess the financial and human resources required by specific local governments to carry out their constitutionally assigned functions. \$77 300 — 18 months.

88-0352 Impact of refugee resettlement (Zambia)*

For the University of Zambia, Lusaka, to enable the Institute of African Studies to examine the long-term consequences for the refugees of being either self-settled or scheme-settled and the impact of refugees on the material living conditions and the physical security of surrounding host populations. \$110 000 — 12 months.

88-0358 Action-research training program (Indonesia)

For the Sebelas Maret University, Surakarta, to enable the Research Centre to develop an effective action-research training program for future use in training development workers in Indonesia. \$142 000 — 33 months.

88-0360 Population education program at Al-Azhar University (Egypt)

For Al-Azhar University, Cairo, to enable the International Islamic Center for Population Studies and Research to survey the knowledge and attitudes of Muslim students at the University toward population and population trends, to examine curricula (both theological and scientific) to identify content concerning population issues, and to consider how population studies could be included in the curriculum or if they must be taught separately. \$26 900 — 12 months.

88-0364 Migration and urbanization: the case of Douala and Yaoundé (Cameroon)*

To enable the Direction nationale du deuxième recensement général de la population et de l'habitat, Yaoundé, to supply the authorities with necessary census information for making decisions. \$208 100 — 24 months.

88-0374 Education and cultural transformations of Andean Indians*

To enable the Centro Andino de Acción Popular, Ecuador, to continue studying the effects of education on Indian cultures and traditional knowledge, and to establish a mechanism to link researchers and institutions, disseminate research results, and strengthen the research capacity of Andean countries. \$190 500 — 36 months.

88-0376 Rural women's access to land (Tanzania)*

To enable the University of Dar es Salaam to examine the situation of women in rural areas (Pare), where both customary laws and civil laws coexist with regard to land ownership. \$29 800 — 30 months.

88-0377 Emerging settlement patterns in Narmada (India)*

To enable the Institute of Regional Analysis, Bhopal, to assess the impact of the Narmada Dam Project on settlements in the region in socioeconomic, cultural, and ecological terms and to develop, with the participation of the people likely to be affected, appropriate strategies for smoothing the process of transformation and reducing its ill-effects. \$237 000 — 36 months.

88-0379 Rural food security (Zimbabwe)*

For the University of Zimbabwe, Harare, to enable the Department of Economics to investigate the apparent contradiction between rising marketed food surpluses and continuing food insecurity and malnutrition in communal areas. \$206 500 — 30 months.

88-0389 Education and work network (Latin America)*

To enable the Centro de Estudios de Población, Argentina, to establish a regional mechanism to bring together researchers and research institutions working on issues related to education and work. The aim of the network will be to facilitate the exchange of information on research results, to carry out collaborative work, to prepare reviews and evaluations, and to identify problem areas for future research. \$65 800 — 24 months.

88-0392 Mothers and the transformation of gender practices (Argentina)*

To enable the Grupo de Estudios Sociales para la Transformación, Buenos Aires, to examine the nature of the negotiation process between men and women within the family and to analyze the long-term effects on young adult children. \$67 300 — 12 months.

88-0393 Women, land rights, and environment (Nigeria)*

To enable the University of Ibadan to investigate the rights of rural women in the Lagelu Local Government area of Oyo State with respect to access to land under statutory laws, customary laws, and the normative system within the community and the family. \$29 110 — 36 months.

88-0398 Women's work and structural adjustment (Latin America and the Caribbean)

To enable the International Center for Research on Women, USA, to focus attention on the recessionary effects of adjustment policies resulting from the debt crisis on women's life in Latin America and the Caribbean and to generate information to help policymakers minimize the negative social effects produced by economic adjustment in the region. \$71 860 — 18 months.

88-0404 Urban land market in Cuenca and Machala (Ecuador)*

To enable the Corporación de Estudios Regionales, Guayaquil, to study the urban land market in Cuenca and Machala. \$33 800 — 12 months.

88-0406 Statutory laws, customary laws, and village practices (Thailand)*

To enable Chiang Mai University to examine the application of statutory and customary laws and their relationship with and impact on intrahousehold decision-making and patterns of community political participation of men and women in rural northern Thailand. \$34 980 — 24 months.

88-1007 Structural adjustment and financial liberalization (Tunisia—Canada)

For the Université de Tunis and the University of Montreal, Quebec, to analyze and evaluate, for Tunisia, various problems and economic-policy alternatives where macroeconomic, monetary, and financial aspects are central and which have become urgent in recent years. \$349 944 — 36 months.

88-1008 Family farms (Brazil—Tunisia—Canada)*

To enable the Universidade Estadual de Campinas, the Universidade Federal da Paraíba, the Universidade Federal do Rio Grande do Sul, Brazil; the ministère de l'Agriculture, Tunisia; and the University of Quebec, Rimouski, to examine adaptation and operation mechanisms of family farms in Brazil, Tunisia, and Canada. \$125 100 — 36 months.

88-1023 Village hydraulics, extension, and community participation (Togo—Canada)

To enable the Université du Bénin, Togo, and the University of Quebec, Hull, to study the implantation process of the village hydraulics project (VHP—CUSO) and to fine tune extension methods characterized by Canadian University Service Overseas's (CUSO) intervention and the participation of VHP recipient communities to the various phase of the project. \$80 900 — 24 months.

88-1025 Proposal to establish an industrial-policies network (West and Central Africa—Canada)*

For the Conseil pour le développement de la recherche économique et sociale en Afrique, Senegal, and the University of Montreal, Quebec, to increase African capacity to analyze economic policy measures that are being and will be applied by various African governments in the structural readjustment of their economies. \$1 356 000 — 36 months.

88-1026 Low-cost travel modes in Ningbo (China—Canada)*

To enable Tongji University, China, and

the University of Calgary, Alberta, to document and evaluate the existing role of low-cost travel modes in meeting the needs of the urban population and present guidelines for their inclusion in the process of overall planning for transport. \$236 200 — 25 months.

88-1042 Land use and food production (Dominican Republic—Canada)

For the Universidad Católica Madre y Maestra, Santiago de los Caballeros, and the University of Sherbrooke, Quebec, to identify the interrelations of the various systems of land use and to determine the local potential for food production according to a number of evolution scenarios. \$349 550 — 36 months.

88-1055 Summer institute on gender and development (Global—Canada) — Phase II

To enable St Mary's University, Nova Scotia, in collaboration with Dalhousie University, to assist students to identify research questions, examine methodological debates and advances, and analyze the existing literature on women and development with a view to upgrading the ability of students to conduct and supervise high quality social science research on women and gender relations. \$195 000 — 24 months.

Division activity projects

Apart from the activities described in the preceding pages, IDRC funds several relatively small-scale projects designed to support, in one way or another, the activities in progress in the divisions. These are such things as promoting workshops or seminars on the research priorities in a given region or topic, enabling researchers from developing countries to participate in meetings of experts in various parts of the world, or making it possible for specialists to visit and assist a project team in another country. There are also funds available to IDRC's regional offices to support activities in their respective regions.

Most division activity projects cover the cost of meetings or of consultations directly or indirectly connected with IDRC-funded research. During the past fiscal year, IDRC approved division activity projects to a total cost of \$8.5 million. The following are examples.

- Two seminars were organized to discuss ways of helping farmers stop the use of dangerous pesticides in northern Thailand.

- All past information on the Pearson Fellowships was collected by a consultant thus laying the groundwork for a comprehensive evaluation of the program.
- As part of a study examining the impact of the South on the North, a Canadian professor researched changes wrought upon the environment by various activities in developing countries.
- A consultant visited India to find nongovernmental organizations interested in using information science methodologies as a way of helping the disadvantaged.
- At an AIDS workshop in Indonesia, guidelines were established to promote education and information about the disease among the public and health professionals.
- Ten scientists from Africa and Latin America participated in a workshop on how to create small-scale industries based on the use of natural extracts from indigenous plants.
- A workshop brought together specialists from Brazil, China, India, and Zimbabwe to discuss strategies for sustainable rural industrialization.
- Experts from several countries, institutions, and social science disciplines met at a workshop that focused on Latin American issues — in particular, the human dimensions of change.
- African scientists met in Swaziland to discuss ways to implement programs on economically sustainable agroforestry.
- An 8-day field trip to the largest lake in Xinjiang, China, was organized to examine why the lake may dry up, adding to the already difficult problem of desertification in the province.
- Two leading African forestry officials attended an international bamboo workshop in India to explore the possibilities of improving species in Africa.

Fellowships

Pearson fellowships

Pearson fellows undertake a program of academic study focusing on public administration and management in the Faculty of Administration of the University of Ottawa and the School of Public Administration of Carleton University, Ottawa, ON, Canada, with practical attachment with a government department.

Arce, Gloria (the Philippines)

Chavez, Jose Manuel (Peru)

Goel, Anurag (India)

Ikfat, Mushfeka (Bangladesh)

Jasan, Lokman Hakin Mohd. (Malaysia)

Jawula, Mahamadu (Ghana)

Jayawardena, Chandrasiri (Sri Lanka)

Kalebe, Tedson A. (Malawi)

Maakwe, Galaletsang (Botswana)

Medina Recio, Arelis L. (Dominican Republic)

Menon, Yesodhara (India)

Niang, Mbaye (Senegal)

Petro Koni Zeze, Georges (Central African Republic)

Rwabukwisi, Jean-Marie (Rwanda)

Sabo, Issa (Niger)

Uriarte, Rosario (the Philippines)

Wade, Emmie S. (Zimbabwe)

Project-related awards

Ababe, Shewangizaw (Ethiopia)
Undertake doctoral studies in ecology with particular reference to plant-insect relationships; Department of Biology, Carleton University, Ottawa, ON, Canada

Ametonou, François (Bénin)
Undertake studies toward a master's degree in information sciences; School of Library Sciences, University of Montreal, Montreal, PQ, Canada

Brito Bacellar, Olavo (Brazil)
Undertake courses on demographic analysis, social research methodology statistics, and policy evaluation; Department of Demography, University of Montreal, Montreal, PQ, Canada

Castilla, Juan Carlos (Chile)
Undertake training in the field of fisheries;

Department of Zoology and School of Fisheries, University of Washington, Seattle, WA, USA

Gadiel, Anna (United Republic of Tanzania)

Undertake a master's degree in agricultural economics; University of Guelph, Guelph, ON, Canada

Gamsore, Lilibzanga F. (Burkina Faso)
Undertake a training course on agricultural cooperatives; University of Sherbrooke, Sherbrooke, PQ, Canada

Institut panafricain pour le développement (Burkina Faso)
Support a training seminar in documentary techniques organized by the Institut panafricain pour le développement-Sahel West Africa; Regional Branch-Sahel West Africa, Institut panafricain pour le développement, Ouagadougou, Burkina Faso

Kakabou, Baba (Togo)

Undertake studies toward a master's degree in agronomic design engineering, with concentration in crop production; Université du Bénin, Lomé, Togo

Kamar, Margaret (Kenya)

Undertake a master's degree in forestry with particular reference to moisture conservation in agroforestry; School of Graduate Studies, University of Toronto, Toronto, ON, Canada

Lombardi, Cintia (Brazil)

Undertake graduate studies leading to a master's degree in sociology with special reference to medicine; Royal Holloway and Bedford New College, University of London, London, UK

Maramba, Petronella T.E. (Zimbabwe)
Undertakes a master's degree program in development studies specifically on women and development; Institute of Development Studies, The Hague, the Netherlands

Mushobozy, Deux Kyanjweli (United Republic of Tanzania)

Undertake a master's degree in pest management; Department of Environmental Biology, Simon Fraser University, Burnaby, BC, Canada

Nang'ayo, Francis L. (Kenya)

Undertake a master's degree in applied agricultural entomology; University of Guelph, Guelph, ON, Canada

Ndiaye, Babacar (Senegal)

Undertake studies in earth sciences; University of Quebec, Chicoutimi, PQ, Canada

Ogutu, Richard (Uganda)

Undertake doctoral studies to strengthen the capacity in carrying out its mandate relating to freshwater fisheries research; Department of Zoology, University of Manitoba, Winnipeg, MB, Canada

Ouedraogo, Jacques Gueda (Burkina Faso)

Undertake a training course on agricultural cooperatives; Institute for Research and Training for Cooperatives, University of Sherbrooke, Sherbrooke, PQ, Canada

Sapkota, Maheshwar (Nepal)

Undertake a doctoral degree program in animal science; University of the Philippines at Los Baños, Laguna, the Philippines

Taban, Eban L. (Kenya)

Attend a 3-month course on health information systems for primary health; School of Tropical Medicine, Liverpool, UK

Thapa, Bijaya Kumar (Nepal)

Undertake a doctoral degree program in education; Faculty of Education, University of Alberta, Edmonton, AB, Canada

Vandou, Bagda (Côte d'Ivoire)

Complete research toward a doctoral degree in rural economics; Faculté des sciences économiques, Université d'Abidjan, Abidjan, Côte d'Ivoire

Zvietcovich, Guillermo (Peru)

Undertake a training course on promotion of agroindustries; Instituto de Fomento Agroindustrial, Sabánilla, Costa Rica

Program-related awards

Alpha, Aboubacrine (Mali)

Take part in a seminar on the digital simulation of free surface flow; Université Mohammed d'Ingénieurs, Rabat, Morocco

Balde, Oumar (Senegal)

Take part in a seminar on the digital simulation of free surface flow; Université Mohammed d'Ingénieurs, Rabat, Morocco

Barah, John Bosco (Cameroon)

Undertake the training course in integrated fish farming; Freshwater Fisheries Research Centre, Regional Lead Centre in China, Wuxi, China

Bouraima, Saadou (Bénin)

Take part in a training course on the comparative analysis of rural development experiments; École Internationale de Bordeaux, Talence, France

Cai, Jianfeng (China)

Undertake graduate studies leading to a master's degree in agricultural communications; Department of Agricultural Journalism, University of Wisconsin, Madison, WI, USA

Charoen, Khaoparisuthi (Thailand)

Undertake a study on rural research and rural policy; Institute of Development Studies, Brighton, Sussex, UK

Chui, James (Kenya)

Undertake studies for a doctoral degree in soil sciences; Department of Soil Science, University of Nairobi, Nairobi, Kenya

Coly, Seni (Senegal)

Take part in a seminar on the digital simulation of free surface flow; Université Mohammed d'Ingénieurs, Rabat, Morocco

Das Gupta, Monica (India)

Research attachment within the context of the project *Birth interval dynamics — Phase II*; School of Public Health, Harvard University, Boston, MA, USA

Dayao, Benefa (the Philippines)

Attend a 3-week course on training methods; Asia and Pacific Programme for Development Training and Communication Planning, United Nations Development Programme, Bangkok, Thailand

De Luna, Ellen (the Philippines)

Participate in a 4-week training workshop on production techniques for extension audiovisual aids; Asia and Pacific Programme for Development Training and Communication Planning, United Nations Development Programme, Bangkok, Thailand

Dong, Luying (China)

One-year study attachment to participate in the International Workshop on Models and Policy Making; Systems Research Institute, Pune, India

Duan, Junhu (China)

Undertake a 2-week training internship in project financial and administrative management; IDRC Regional Office, Singapore

Egana, Loreto (Chile)

Undertake graduate studies leading to a doctoral degree in education; University College of Wales, Cardiff, UK, and Programa Interdisciplinario de Investigaciones en Educación, Santiago, Chile

Elenga, Maixent (Congo)

Take part in a seminar on the digital simulation of free surface flow; Université Mohammed d'Ingénieurs, Rabat, Morocco

Elepano, Arnold R. (the Philippines)

Undertake a doctoral degree in agricultural engineering specializing in

postharvest technologies; Department of Agricultural Engineering, Queen's University, Kingston, ON, Canada

Espinola, Viola (Chile)

Undertake graduate studies leading to a doctoral degree in education; University College of Wales, Cardiff, UK

Fagtanan, Constanca (the Philippines)

Participate in the second Asia-Pacific training course on the latest developments in ferrocement technology; International Symposium of Ferrocement, New Delhi, India

Forbin, Innocent (Cameroon)

Participate in a training course in integrated fish farming; Freshwater Fisheries Research Centre, Regional Lead Centre, Jiangsu, China

Gadou, Abelnicaise (Côte d'Ivoire)

Take part in a seminar on the digital simulation of free surface flow; Université Mohammed d'Ingénieurs, Rabat, Morocco

Geethananda, Hema (Sri Lanka)

Undertake a master's of librarianship program; College of Librarianship, University College of Wales, Aberystwyth, UK

Girma, Beshah (Ethiopia)

Undertake graduate studies leading to a doctoral degree in education sciences; McGill University, Montreal, PQ, Canada

Gonzalez, Echeverri German (Colombia)

Undertake graduate studies leading to a doctoral degree in epidemiology; Department of Epidemiology, McGill University, Montreal, PQ, Canada

Hawa, Ali Farah (Somalia)

Undertake a master's course in applied human nutrition; University of Nairobi, Nairobi, Kenya

Kabonajoro, Rashidi (Burundi)

Undertake studies for a doctoral degree in conservancy (science and techniques); Université Cheikh Anta Diop, Dakar, Senegal

Kawau, Ferdinand (United Republic of Tanzania)

Undertake a master's course in applied human nutrition; University of Nairobi, Nairobi, Kenya

Kayondo, J.F. Kenguga (Uganda)

Participate in a training workshop to provide basic skills in epidemiological research methodology; Arusha, United Republic of Tanzania

Kiyaga-Nsubuga, John (Uganda)

Undertake doctoral courses in international regional studies; Department of Political Science, University of Toronto, Toronto, ON, Canada

Kouassi, Auguste (Côte d'Ivoire)

Undertake a training course on the comparative analysis of experiments in rural development; École Internationale de Bordeaux, Talence, France

Koumba, Rene Paul (Gabon)

Undertake a training course on the comparative analysis of experiments in rural development; École Internationale de Bordeaux, Talence, France

Laurent, Nounamo (Cameroon)

Undertake a training course on the comparative analysis of experiments in rural development; École Internationale de Bordeaux, Talence, France

Leon Velarde, Carlos (Peru)

Undertake doctoral studies in animal and poultry science; University of Guelph, Guelph, ON, Canada

Li, Junfeng (China)

One-year study attachment to participate in the International Workshop on Models and Policy Making; Systems Research Institute, Pune, India

Maboshe, M. (Zambia)

Participate in a training workshop to provide basic skills in epidemiological research methodology; Arusha, United Republic of Tanzania

Matricia, Titiek (Indonesia)

Undertake a master's degree in biology on carp genetics; Department of Biology, Dalhousie University, Halifax, NS, Canada

Mchihyo, Edwin P. (United Republic of Tanzania)

Undertake a master's degree in agrogeology; Department of Land Reform, University of Guelph, Guelph, ON, Canada

Mejri, Salah (Tunisia)

Undertake a training course on the comparative analysis of experiments in rural development; École Internationale de Bordeaux, Talence, France

Melebou, M. (Togo)

Undertake a training course on the comparative analysis of experiments in rural development; École Internationale de Bordeaux, Talence, France

Mutonkoley, Mianda (South Africa)

Undertake doctoral studies in development sociology; Department of Sociology, Laval University, St Foy, PQ, Canada

Mwobobia, Isaac (Kenya)

Participate in a training workshop to provide basic skills in epidemiological research methodology; Arusha, United Republic of Tanzania

Nate, Marissa C. (the Philippines)

Complete graduate studies in plant

pathology; University of the Philippines at Los Baños, Laguna, the Philippines

Ndamba, Jerikias (Zimbabwe)

Participate in a training workshop to provide basic skills in epidemiological research methodology; Arusha, United Republic of Tanzania

Ndoutoumou, Ndoumou (Gabon)

Undertake studies toward a master's degree in library science; School of Library Sciences, University of Montreal, Montreal, PQ, Canada

Ngaba-Waye, Adoum (Chad)

Undertake doctoral studies in conservancy (science and techniques); Université Cheikh Anta Diop, Dakar, Senegal

Ntilivamunda, Tharcisse (Burundi)

Undertake doctoral studies in conservancy (science and techniques); Université Cheikh Anta Diop, Dakar, Senegal

Nzonda, Marcel (Congo)

Undertake a training course on the comparative analysis of rural development experiments; École Internationale de Bordeaux, Talence, France

Ousmane, Abdou (Niger)

Take part in a seminar on the digital simulation of free surface flow; Université Mohammed d'Ingénieurs, Rabat, Morocco

Padilla, Jose E. (the Philippines)

Undertake the field research, data analysis, and thesis preparation requirements of doctoral program in economics specializing in fisheries; Simon Fraser University, Burnaby, BC, Canada

Rojas, Patricio V. (Chile)

To undertake studies in forestry on the topics of silviculture and genetics; University of São Paulo, Piracicaba, Brazil

Rutatora, D.F. (United Republic of Tanzania)

To undertake a doctoral degree in extension education; University of Toronto, Toronto, ON, Canada

Samiano, Arsenio R. (the Philippines)

Undertake a master's degree program in agronomy with specialization in farming systems; Asian Institute of Technology, Bangkok, Thailand

Sarr, Amaandou (Senegal)

Take part in a seminar on the digital simulation of free surface flow; Université Mohammed d'Ingénieurs, Rabat, Morocco

Sayre, Elmer V. (the Philippines)

Undertake graduate studies leading to a doctoral degree in community development; University of the Philippines at Los Baños, Laguna, the Philippines

Shaukat, Ali (Pakistan)

Undertake an applied study attachment;

Poison Unit, New Cross Hospital, London, UK

Souma, Gérard (Senegal)

Take part in a seminar on the digital simulation of free surface flow; Université Mohammed d'Ingénieurs, Rabat, Morocco

Soumana, Idressa (Niger)

Take part in a training course on the comparative analysis of rural development experiments; École Internationale de Bordeaux, Talence, France

Sutrisna, Ir Ida Bagus (Indonesia)

Participate in the 4-week training workshop on production techniques for extension audiovisuals; Asia and Pacific Programme for Development Training and Communication Planning, United Nations Development Programme, Bangkok, Thailand

Talavera, Maria Luisa (Bolivia)

Undertake graduate studies leading to a master's degree in education; Departamento de Investigaciones Educativas, Centro de Investigación y Estudios Avanzados, México, Mexico

Timoulali, Youssef (Morocco)

Undertake studies toward a master's degree in geology and remote sensing; Faculty of Arts and Sciences, University of Montreal, Montreal, PQ, Canada

Virada, Somswasdi (Thailand)

Undertake a training course on women's studies; Summer Institute on Gender and Development, Saint Mary's University, Halifax, NS, Canada

Yosuf, Melkie Edris (Ethiopia)

Undertake a master's course in applied human nutrition; University of Nairobi, Nairobi, Kenya

Zanze, Marguerite (Senegal)

Undertake studies toward a doctoral degree in veterinary science; École inter-États des sciences et médecine vétérinaires, Dakar, Senegal

Zhang, Zhang (China)

Undertake a 2-week training internship in project financial and administrative management; IDRC Regional Office, Singapore

Zoungoula, Germain (Central African Republic)

Undertake intensive training and in-depth research in higher education teaching; Teaching Service, University of Montreal, Montreal, PQ, Canada

Zourdani, Makhlof (Algeria)

Take part in a seminar on the digital simulation of free surface flow; Université Mohammed d'Ingénieurs, Rabat, Morocco

Young Canadian researchers' award

Adams, Alayne (London School of Hygiene and Tropical Medicine)

Study seasonal food shortage in the Sahel and its nutritional and socioeconomic implications for vulnerable households in partial fulfillment of the requirements for a doctoral degree; Institut du Sahel, Bamako, Mali

Bell, Kim (Dalhousie University)

Undertake research on life-cycle analysis for enhancement and management of anadromous goby fisheries in partial fulfillment of doctoral degree; Department of Zoology, University of West Indies, Mona, Jamaica

Berneche, Francine (University of Montreal)

Undertake research in the Caribbean on the application of distance teaching methods to studies in library science and information science in the French-speaking Caribbean; University Library (Caribbean-Guiana), Kingston, Jamaica

Casey, Joanna (University of Toronto)

Undertake research on the place of indigenous wild food resources in the agricultural economy of the Gambaga Escarpment of northern Ghana in partial fulfillment of the requirements for a doctoral degree; Department of Botany, Food Science, and Nutrition, University of Ghana, Legon, Accra, Ghana

Chiasson, Hélène (Macdonald College of McGill University)

Undertake thesis research in Guinea in partial fulfillment of the requirements for a doctoral degree; Université de Conakry, Conakry, Guinea

Corat, Saniye Gulser (Carleton University)

Undertake field research on agroindustrial complexes in partial fulfillment of the requirements for a doctoral degree; Ministry of Higher Education and Scientific Research, Institute of Human Sciences, Yaoundé, Cameroon

Coumans, Catharina (McMaster University)

Undertake research for a thesis "Building basic Christian communities — indigenization and change in the Philippines" in partial fulfillment of the requirements for a doctoral degree; Institute of Philippines Culture, Ateneo de Manila University, Quezon City, the Philippines

Fédération professionnelle des journalistes du Québec (Canada)

Support for the North-South bursary program to train professional journalists

with at least 3 years' experience;
Fédération professionnelle des journalistes
du Québec, Montreal, PQ, Canada

Ferguson, Elaine (University of Guelph)
Undertake research on a new dietary
method for use in less industrialized
countries in partial fulfillment of the
requirements for a doctoral degree;
Institute of Medical Research, Madang,
Papua New Guinea

Himbara, David (Queen's University)
Undertake research on the role of
indigenous entrepreneurs in Kenyan
development in partial fulfillment of the
requirements for a doctoral degree in
political science; Institute for Develop-
ment Studies, University of Nairobi,
Nairobi, Kenya

Johnson, Darryl Grant (Technical
University of Nova Scotia)
Undertake research on architectural design
toward a master's degree; Department of
Civil Engineering, Pontificia Universidad
Católica del Perú, Lima, Peru

Lalonde, Gloria (McGill University)
Undertake research in India on gender
ideology and women's work in rural India
in partial fulfillment of the requirements
for a doctoral degree; Department of
Sociology, University of Delhi, New
Delhi, India

Lee, Geoffrey Kay (Technical University
of Nova Scotia)
Undertake research on architectural design
toward a master's degree; Department of
Civil Engineering, Pontificia Universidad
Católica del Perú, Lima, Peru

MacDonald, Laura Catharine (York
University)
Undertake research on promoting
participation by nongovernmental
organizations and community groups in
Central America; Instituto de
Investigaciones Económicas y Sociales,
Managua, Nicaragua

McInnes, Brent (University of Ottawa)
Research on gold in the New Guinea
island arc and exploration strategies for its
discovery; Department of Minerals and
Energy, Geological Institute of Papua New
Guinea, Port Moresby, Papua New Guinea

Montejo, Maria Elisa (Laval University)
Undertake research for a doctoral thesis
entitled "Women in rural environments
and ideologies: a comparison between
Mexico and Colombia"; Asociación
Colombiana para el Estudio de la
Población, Bogotá, Colombia

Ramos, Victor (Laval University)
Undertake research toward a doctoral
degree in anthropology on the emigration
and adaptation of Paraguayan immigrants;
Facultad de Humanidades y Ciencias

Sociales, Universidad Nacional de
Misiones, Misiones, Argentina

Rowe, Gerald (University of Western
Ontario)
Complete research on the elucidation of
the mechanisms underlying the effect of
substrate amino-acid composition on
insect toxicity yield in strains of *Bacillus*
thuringiensis (Bt); Centro Nacional de
Protección Vegetal, Dirección General de
Tecnología Agrícola, Managua, Nicaragua

Schmidt, Margaret (University of British
Columbia)
Undertake research on a microcomputer-
based assessment of deforestation and
forest degradation in the Jiku Khola
watershed in Nepal using a geographic
information system; Integrated Survey
Section, Kathmandu, Nepal

Shackell, Nancy (Dalhousie University)
Undertake research on the relationship
between developmental stability and level
of heterozygosity in *Tilapia* in partial
fulfillment of the requirements for a
doctoral degree; National Inland Fisheries
Institute, Kasetsart University, Bangkok,
Thailand

Sinclair, Pamela (Dalhousie University)
Undertake research on genetic improve-
ment of fish growth rates in tropical
aquaculture in Thailand in partial
fulfillment of the requirements for a
master's degree; Nong Kai Fisheries
Station, Nong Kai, Thailand

Tegler, Brent A. (University of Guelph)
Research on vegetative control of wind
erosion and dust emissions in Sahelian
West Africa in partial fulfillment of the
requirements for a doctoral degree in
environmental biology; École normale
supérieure, Sahel, Mali

Gemini award

Spencer, Christina (*The Ottawa Citizen*)
Internship with the Gemini News Service
and field research in India; Gemini News
Service, London, UK

John G. Bene fellow- ship in social forestry

Rewald, Michael (York University)
Follow-up and dissemination of the results
from community forestry studies in
tropical rainforests in Central America.
Instituto Nacional de Investigaciones
Forestales y Agropecuarias, Quintana
Roo, Mexico

Other

Kimasha, G.F.R. (United Republic of
Tanzania)
Undertake postgraduate diploma studies in
computer studies; University of Nairobi,
Nairobi, Kenya

Lema, I.N. (United Republic of Tanzania)
Undertake postgraduate diploma studies in
computer studies; University of Nairobi,
Nairobi, Kenya

Mwaibasa, B.L.K. (United Republic of
Tanzania)
Undertake postgraduate diploma studies in
computer studies; University of Nairobi,
Nairobi, Kenya

Training

De Silva, Sena S. (Sierra Leone)
Undertake research on the development of
fish nutrition; Department of Zoology,
National University of Singapore,
Singapore

Publications

IDRC publications

IDRC annual report 1987–1988 / Rapport annuel CRDI 1987–1988. IDRC-003/88e,f, 93 + 86 pp.

Méthodes de recherche applicables aux essais zootechniques en ferme : compte rendu de l'atelier tenu à Alep (Syrie) du 25 au 28 mars 1985. Nordblom, T.L., Ahmed, A.K.H., Potts, G.R., réd. IDRC-242f, 337 pp.

Étude de marché pour les produits et les procédés alimentaires dans les pays en développement. Young, R.H., MacCormac, C.W., réd. IDRC-249f. xii + 163 pp.

L'enseignement primaire à coût modique : mise en oeuvre d'une innovation dans six pays. Cummings, W.K. IDRC-252f. x + 133 pp.

Évaluation de la recherche agricole à l'échelle nationale : compte rendu d'un atelier tenu à Singapour du 7 au 9 juillet 1986. Daniels, D., réd. IDRC-254f, viii + 180 pp.

Impact of modernization on development and demographic behaviour: case studies in seven Third World countries. Vlassoff, C., Barkat-e-Khuda, ed. IDRC-260e, xi + 123 pp.

Artisans in economic development: evidence from Asia. Pye, E.A., ed. IDRC-262e, x + 125 pp.

Búsqueda: CIID 1987 — la investigación en los países pequeños. IDRC-263s, 38 pp.

Reservoir fishery management and development in Asia: proceedings of a workshop held in Kathmandu, Nepal, 23–28 November 1987. De Silva, S.S., ed. IDRC-264e, xii + 246 pp.

Improving young child feeding in eastern and southern Africa — household-level food technology: proceedings of a workshop held in Nairobi, Kenya, 12–16 October 1987. Alnwick, D., Moses, S., Schmidt, O.G., ed. IDRC-265e, xxi + 380 pp.

Research issues in child health and child care: proceedings of a workshop held in Accra, Ghana, 22–26 September 1986. Mackenzie, F., Ewusi, K., ed. IDRC-266e, viii + 118 pp.

Goat meat production in Asia: proceedings of a workshop held in Tando Jam, Pakistan, 13–18 March 1988. Devendra, C., ed. IDRC-268e, xi + 262 pp.

Searching: IDRC 1988; fresh water — the human imperative. IDRC-272e. 40 pp.

Quête d'avenir : CRDI 1988; l'eau douce — un impératif pour l'humanité. IDRC-272f. 44 pp.

Méthodes préconisées dans les systèmes d'information relatifs au développement, Volume 1. Manuel de traitement des données bibliographiques dans les systèmes d'information relatifs au développement. Morin-Labatut, G., Sly, M. IDRC-TS40f, 297 pp.

Transfert de technologie et nationalisation au Ghana. Adei, S. IDRC-TS55f, xiii + 126 pp.

Mortalité et morbidité : l'expérience de Matlab. D'Souza, S., Bhuiya, A., Zimicki, S., Sheikh, K. IDRC-TS56f, 60 pp.

Effets d'une baisse du taux de fécondité sur la mortalité infantile. Taucher, E. IDRC-TS57f, viii + 56 pp.

West African sources of health and mortality information: a comparative review. Hill, A.G., Graham, W.J. IDRC-TS58e, viii + 63 pp.

Sources d'information sur la santé et la mortalité en Afrique de l'Ouest : une étude comparative. Hill, A.G., Graham, W.J. IDRC-TS58f, viii + 67 pp.

Artisan industries in Asia: four case studies. Kathuria, S., Miralao, V., Joseph, R. IDRC-TS60e, vi + 90 pp.

Techniques de collecte et d'analyse de données sur la mortalité périnatale à Kinshasa, Zaïre. Nzita Kikhela, D. IDRC-TS61f, x + 86 pp.

Évaluation des projets financés par le CRDI à l'Université d'agriculture Sokoine de Tanzanie. IDRC-MR118f, xviii + 109 pp.

Recherche sur les systèmes de production en Afrique de l'Ouest : compte rendu de l'atelier de travail du Réseau ouest-africain de recherche sur les systèmes de production, Dakar, Sénégal, 10–14 mars 1986. Abalu, G.O.I., Mutsaers, H., Faye, J. IDRC-MR172f, vi + 131 pp.

Bibliografía sobre educación indígena en América Latina. Arias, A., Isaza, G., comp. IDRC-MR177s, 242 pp.

An annotated bibliography (1803–1987) of the Indian shad, Tenulosa ilisha (Ham.) (Clupeidae: Teleostei). Jafri, S.I.H., Melvin, G.D. IDRC-MR178e, vi + 84 pp.

South–South development assistance: West African case studies. Bobiash, D.J., IDRC-MR179e, iv + 40 pp.

Diffusion of precommercial inventions developed in government-funded research institutions in Nigeria. Adeboye, T. IDRC-MR180e, iii + 43 pp.

Technological capability in oil refining in Sierra Leone. Smith, A.J. IDRC-MR181e, vii + 111 pp.

Clasificación de sistemas de finca para generación y transferencia de tecnología apropiada: seminario efectuado en Ciudad de Panamá, Panamá, del 7 al 12 de diciembre de 1986. Escobar, G., ed. IDRC-MR182s, 219 pp.

National workshop on sorghum: proceedings of the first biennial sorghum workshop held in Baidoa, Somalia, 16–19 June 1986. Mohamed, A.A., Hassan, A.S., ed. IDRC-MR183e, v + 162 pp.

Research on control strategies for the leishmaniasis: proceedings of an international workshop held in Ottawa, Canada, 1–4 June 1987. Walton, B.C., Wijeyaratne, P.M., Modabber, F., ed. IDRC-MR184e, viii + 374 pp.

External labour migration from Turkey and its impact: an evaluation of the literature. Keyder, C., Aksu-Koç, A. IDRC-MR185e, v + 166 pp.

Technology policy failures in Nigeria. Adebifa, A.O. IDRC-MR186e, viii + 120 pp.

Technological change and project execution in a developing economy: evolution of Ajaokuta Steel Plant in Nigeria. Oyeyinka, O., Adeboye, O. IDRC-MR187e, iv + 69 pp.

Case studies on indigenous industrial R&D utilisation. Nath, N.C.B., Misra, L. IDRC-MR188e, xi + 297 pp.

Social factors influencing the translation of innovation into entrepreneurship: three successful and three unsuccessful cases. Adjebeng-Asem, S. IDRC-MR189e, viii + 125 pp.

Bean network: proceedings of the third workshop held in Termas de Panimavida, Chile, 25–28 November 1987. Holberg, A., Edwardson, W., ed. IDRC-MR190e, iv + 299 pp.

Correlates of infant mortality: empirical evidence from Ile-Ife, Nigeria. Adewuyi, A.A., Feyisetan, B.J. IDRC-MR191e, v + 77 pp.

Energy decisions in developing countries in Africa: a case study of Sierra Leone. Davidson, O.R. IDRC-MR192e, x + 99 pp.

La contaminación de aguas subterráneas en áreas urbanas en América Latina:

estudios e investigaciones presentadas en la primera conferencia Latinoamericana sobre hidrología urbana realizada en 1987 en Cochabamba, Bolivia. Ricaldi, V., ed. IDRC-MR193s, vii + 299 pp.

CD-ROM evaluation project: final report. Beaumont, J. IDRC-MR194e, iv + 66 pp.

Prioridades de investigación aplicada en café para pequeños agricultores: seminario taller efectuado en San José, Costa Rica, del 15 al 17 de julio de 1987. Mateo, N., Escobar, G., ed. IDRC-MR195s, 176 pp.

Impacts of great energy projects in Brazil: a comparative study of hydroelectric and nuclear power. Rosa, L.P., Mielnik, O. IDRC-MR196e, viii + 112 pp.

Report of the meeting on common indexing vocabularies, Ottawa, Canada, 3–5 May 1988. Sly, M., ed. IDRC-MR197e, ii + 81 pp.

Services in development: an agenda for research in ASEAN. Sieh, L.M.L., ed. IDRC-MR198e, vii + 224 pp.

Making microfiche: a guide to equipment choices for establishing a microfiche production facility. Derrick, R. IDRC-MR199e, iv + 83 pp.

La fabrication de microfiches: guide de mise sur pied d'un atelier de production de microfiches. Derrick, R. IDRC-MR199f, v + 86 pp.

Research and intervention issues concerning infant and child mortality and health: proceedings of the East Africa workshop. IDRC-MR200e, vi + 276 pp.

Mycorrhiza round table: proceedings of a workshop held at Jawaharlal Nehru University, Delhi – India, March 13–15, 1987. Varna, A.K., Oka, A.K., Mukerji, K.G., Tilak, K.V.B.R., Raj, J. IDRC-MR201e, xvii + 627 pp.

MINISIS Users' group meeting 1987 / Réunion du Groupe des utilisateurs de MINISIS 1987 / Reunión del Grupo de usuarios de MINISIS 1987. IDRC-MR202efs, v + 366 pp.

A framework for livestock policy development in South Korea. IDRC-MR203e, viii + 451 pp.

Eastern and southern Africa network coordinators' review: proceedings of a workshop held at Nairobi, Kenya, 9–12 May 1988. Faris, D.G., Ker, A.D.R., ed. IDRC-MR204e, iv + 100 pp.

Oil crops: sunflower, linseed, and sesame — proceedings of the fourth oil crops network workshop held at Njoro, Kenya, 25–29 January 1988. Omran, A., ed. IDRC-MR205e, xi + 340 pp.

Papers resulting from the meetings to develop an information strategy for IDRC for Africa / Communications découlant des réunions pour l'élaboration de la stratégie d'information du CRDI pour l'Afrique. IDRC-MR206ef, viii + 250 pp.

Ahorro e inversión en Latinoamérica. Werneck, R.L.F., ed. IDRC-MR207s, vii + 346 pp.

The role of animal-breeding studies in farming systems research. de Vaccaro, L. Quijandria, B., Li Pun, H.H. IDRC-MR208e, ii + 151 pp.

Comprehensive preschool education project: final report. Kagitcibasi, Ç., Sunar, D., Bekman, S. IDRC-MR209e, iv + 140 pp.

Accessing university research: the experience of Canadian industry. Potworowski, A. IDRC-MR210e, vi + 82 pp.

Comment accéder à la recherche universitaire: l'expérience des entreprises canadiennes. Potworowski, A. IDRC-MR210f, vii + 100 pp.

Caribbean environmental health research: needs and proposals — PAHO-IDRC consultations held in Hastings, Barbados, 23–25 March 1988. Williams, R., Redekopp, A., ed. IDRC-MR211e, v + 108 pp.

Creole discourse and social development. Carrington, L.D. IDRC-MR212e, ii + 102 pp.

Nonindustrial energy: consumption and supply in cities of China. Lu Yingzhong, Qin Daxiong, Lu Yingyun, Wei Zhihong, Yu Suhua, Tao Jun. IDRC-MR213e, 58 pp.

A regional information system strategy for the Caribbean for the year 2000. IDRC-MR214e, viii + 132 pp.

Energy use patterns and social differences: a Mexican village case study. Energy Group, Physics Department, National University of Mexico. IDRC-MR215e, v + 82 pp.

Charcoal production in Tanzania using improved traditional earth kilns. Kimario, B.T., Ngeresa, K.I. IDRC-MR216e, 26 pp.

Publications and texts by Centre staff¹

Ayling, R.D. 1988. International forestry: farmers and the greening of Africa. *Forestry Chronicle*, 1988 (Oct.), 441–443.

Balson, D., Marrett, C. 1988. Report on UWIDITE-IDRC workshop on computer based communication for Caribbean development, March 28–30, 1988, UWI, Mona Campus, Jamaica. University of the West Indies, Mona, Jamaica. 101 pp.

Bassey, M.W. 1988. Drying needs: the Sierra Leonean farmers' perception. Paper presented at the international colloquium on cereals in warm regions: conservation and processing, Ngaoundere, February 22–27 1988. IDRC, Regional Office for West and Central Africa, Dakar, Senegal. 12 pp.

Bemacsek, G.M. 1988. Improving fisheries development projects in Africa. Paper presented at the world symposium on fishing gear and fishing vessel design, St John's, Newfoundland, 21–24 November 1988. IDRC, Regional Office for Eastern and Southern Africa, Nairobi, Kenya. 26 pp.

_____. 1988. Research priorities in fisheries management as a tool for wetlands: conservation and rural development. Paper presented at the 3rd International Wetlands Conference, Rennes, 19–23 September 1988. IDRC, Regional Office for Eastern and Southern Africa, Nairobi, Kenya. 6 pp.

Bernard, A.K. 1988. North–South collaboration: a Canadian perspective. *In* North–South scholarly exchange: access, equity and collaboration. Mansell, London, UK. pp. 164–178.

Broadbent, K.P. 1988. Importance of information sharing in developing countries: marine science as an example. IDRC, Ottawa, ON, Canada. 8 pp.

_____. 1988. Networking in agricultural information: needs, possibilities and methodologies — a donor's view. IDRC, Ottawa, ON, Canada. 18 pp.

Daniels, W.D. 1989. Issues in strategic planning. IDRC, Ottawa, ON, Canada. 9 pp.

Daniels, W.D., Dottridge, T. 1988. Evaluation in the management of research. Paper presented at the Latin American seminar on evaluation mechanisms in agricultural research institutions, Paipa, 28 August–2 September 1988. IDRC, Ottawa, ON, Canada. 26 pp.

Devendra, C. 1987. Herbivores in the arid and wet tropics. *In* Nutrition of herbivores. Academic Press, Sydney, Australia. pp. 23–46.

_____. 1988. Efficiency in feed resource utilisation and animal production. Paper presented at the world congress on vegetable protein utilization in human food and animal feedstuffs, Singapore, 2–7 October 1988. Regional Office for

¹ Titles are in the original language of publication.

Southeast and East Asia, IDRC, Singapore. 36 pp.

_____. 1988. Forage supplements: nutritional significance and utilisation for drought, meat and milk production in buffaloes. Paper presented at the 2nd World Buffalo Congress, New Delhi, 12–17 December 1988. Regional Office for Southeast and East Asia, IDRC, Singapore. 38 pp.

_____. 1988. Goat production in small farm systems. Paper presented at the Workshop on Small Ruminant Research and Development in the Near East, Cairo, 2–4 November 1988. Regional Office for Southeast and East Asia, IDRC, Singapore. 10 pp.

_____. 1988. Nomenclature, terminology and definitions appropriate to animal nutrition. Paper presented at the 3rd Fish Nutrition Workshop, Bangkok, 6–10 June 1988. Regional Office for Southeast and East Asia, IDRC, Singapore. 15 pp.

_____. ed. 1988. Nonconventional feed resources and fibrous agricultural residues: strategies for expanded utilization — proceedings of a consultation held in Hisar, India, 21–29 March 1988. Regional Office for South Asia, IDRC, New Delhi, India. 194 pp.

_____. 1988. Recent advances in dairy development: feeding and nutrition. Paper presented at the study meeting on dairy farming, Tokyo, 26 July–6 August 1988. Regional Office for Southeast and East Asia, IDRC, Singapore. 54 pp.

_____. 1988. Strategies for the intensive utilization of the feed resources in the Asian region. *In* Nonconventional feed resources and fibrous agricultural residues: strategies for expanded utilization. Indian Council of Agricultural Research, New Delhi, India. pp. 1–20.

_____. 1989. Ruminant production systems in developing countries: resource utilisation. Paper presented at the advisory group meeting on feeding strategies for improving productivity of ruminant livestock in developing countries, Vienna, 13–17 March 1989. Regional Office for Southeast and East Asia, IDRC, Singapore. 38 pp.

Doggett, H. 1988. Sorghum (2nd ed.). Longman Scientific and Technical, Harlow, UK. 512 pp.

Forget, G. 1988. Toxic substances and health. IDRC, Ottawa, ON, Canada. 32 pp.

Hardie, J.D.M. 1988. Measuring development effects of agricultural research in the Third World: case study methodologies. Paper presented at the Agricultural Technology Management Workshop, New Brunswick, NJ, USA,

6–8 July 1988. IDRC, Ottawa, ON, Canada. 25 pp.

Hawtin, G.C., Muehlbauer, F.J., Slinkard, A.E., Singh, K.B. 1988. Current status of cool-season food-legume crop improvement: an assessment of critical needs. *In* World crops: cool-season food legumes. Kluwer Academic, Norwell, MA, USA. pp. 67–80.

Hawtin, G.C., Potts, G.R. 1988. International Development Research Centre support for research on cool-season food-legume crops in Asia and North Africa. *In* World crops: cool-season food legumes. Kluwer Academic, Norwell, MA, USA. pp. 17–24.

Head, I.L. 1988. Challenges to governments and to governance: notes for remarks. Paper presented at the conference on the public service and the needs of changing societies, Montebello, PQ, 12 September 1988. IDRC, Ottawa, ON, Canada. 19 pp.

_____. 1988. Dangers of disequilibria. Paper presented at the Tokyo Meeting of the Trilateral Commission. IDRC, Ottawa, ON, Canada. pp. 54–56.

_____. 1988. Remarks to the 8th World Congress of the Physicians for the Prevention of Nuclear War, Montreal, PQ, 5 June 1988. IDRC, Ottawa, ON, Canada. 7 pp.

_____. 1988. Remarks to the Convocation Ceremony, University of Western Ontario, London, ON, 9 June 1988. IDRC, Ottawa, ON, Canada. 9 pp.

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Bourse Gemini

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Bourses

Bourses Pearson

Les titulaires d'une bourse Pearson entreprennent un programme d'études en administration publique et en gestion à la Faculté d'administration de l'Université d'Ottawa et à l'École d'administration publique de l'Université Carleton, Ottawa, ON, Canada; ils font un stage pratique dans un ministère du gouvernement.

Arce, Gloria (Philippines)

Chavez, Jose Manuel (Pérou)

Goel, Anurag (Inde)

Ikraf, Mushreka (Bangladesh)

Jasan, Lokman Hakin Mohd. (Malaisie)

Jawala, Mahamadu (Ghana)

Jayawardena, Chandrasiri (Sri Lanka)

Kalabe, Tedson A. (Malawi)

Maakwe, Galaletsang (Botswana)

Medina Rectio, Arelis L. (République dominicaine)

Menon, Vessodhara (Inde)

Niang, Mbaye (Sénégal)

Petro Koni Zee, Georges (République centrafricaine)

Rwabukwisi, Jean-Marie (Rwanda)

Sabo, Issa (Niger)

Uriarte, Rosario (Philippines)

Wade, Emmie S. (Zimbabwe)

Bourses accordées dans le cadre de projets

Abbe, Shewangizaw (Éthiopie)
Etudes de doctorat en écologie axé sur les relations entre les plantes et les insectes; Département de biologie, Université Carleton, Ottawa, ON, Canada
Ametonou, François (Bénin)
Etudes de maîtrise en sciences de l'information; École de bibliothéconomie, Université de Montréal, Montréal, QC, Canada
Brito Bacellar, Olavo (Brésil)
Cours d'analyse démographique, de statistique de la méthodologie des recherches sociales et d'évaluation de politiques; Département de démographie, Université de Montréal, Montréal, QC, Canada

Castilla, Juan Carlos (Chili)
Formation dans le domaine des pêches; Fisheries, University of Washington, Seattle, WA, É-U
Gadiel, Anna (République-Unie de Tanzanie)
Etudes de maîtrise en économie agricole; Université de Guelph, Guelph, ON, Canada
Gamso, Lilibzanga F. (Burkina Faso)
Stage de formation en coopératives agricoles; Université de Sherbrooke, Sherbrooke, QC, Canada
Institut panaméricain pour le développement (Burkina Faso)
Séminaire de formation sur les techniques documentaires organisés par l'Institut panaméricain pour le développement-Afrique de l'Ouest Sahel, Direction régionale-Afrique de l'Ouest Sahel, Institut panaméricain pour le développement, Ouagadougou, Burkina Faso
Kakabou, Baba (Togo)
Etudes menant à un diplôme d'ingénieur agronomique (conception) — option production végétale (maîtrise); Université du Bénin, Lomé, Togo
Kamar, Margaret (Kenya)
Etudes de maîtrise en foresterie axée sur la conservation de l'humidité en agroforesterie; École des études supérieures, Université de Toronto, Toronto, ON, Canada
Lombardi, Cintia (Brésil)
Etudes supérieures menant à une maîtrise en sociologie de la médecine; Royal Holloway and Bedford New College, University of London, R-U
Maramba, Petronella T.F. (Zimbabwe)
Maîtrise en études du développement; sur les femmes et le développement; Institut des études du développement, La Haye, Pays-Bas
Mushobozo, Deux Kyanjwell (République-Unie de Tanzanie)
Etudes de maîtrise en lutte contre les ennemis des cultures; Département de biologie environnementale, Université Simon Fraser, Burnaby, BC, Canada
Nang'ayo, Francis L. (Kenya)
Etudes de maîtrise en entomologie agricole appliquée; Université de Guelph, Guelph, ON, Canada
Ndiaye, Babacar (Sénégal)
Stage dans le domaine des sciences de la terre; Université du Québec à Chicoutimi, QC, Canada

Bourses accordées dans le cadre de programmes

Ogutu, Richard (Ouganda)
Etudes de doctorat visant à renforcer la capacité de l'institution de s'acquitter de son mandat en matière de recherche sur les pêches en eau douce; Département de zoologie, Université du Manioba, Winnipeg, MB, Canada
Ouedraogo, Jacques Gueda (Burkina Faso)
Stage de formation en coopératives agricoles; Institut de recherche et d'enseignement pour les coopératives, Université de Sherbrooke, Sherbrooke, QC, Canada
Sapkota, Maheshwar (Népal)
Etudes de doctorat en zoologie; University of the Philippines at Los Baños, Laguna, Philippines
Taban, Eban L. (Kenya)
Cours de trois mois sur les systèmes d'information pour les soins de santé primaires; School of Tropical Medicine, Liverpool, R-U
Thapa, Bijaya Kumar (Népal)
Etudes de doctorat en éducation; Faculté d'éducation, Université de l'Alberta, Edmonton, AB, Canada
Vandou, Bagda (Côte d'Ivoire)
Terminer des travaux de recherche menant à un doctorat de troisième cycle en économie rurale; Faculté des sciences économiques, Université d'Abidjan, Abidjan, Côte d'Ivoire
Zveticovich, Guillermo (Pérou)
Cours de formation sur la promotion des agro-industries; Instituto de Fomento Agroindustrial, Sabánilla, Costa Rica
Alpha, Aboubacrine (Mali)
Participer au séminaire sur la simulation numérique des écoulements à surface libre; Université Mohammed d'ingénieurs, Rabat, Maroc
Baide, Oumar (Sénégal)
Effectuer un stage sur la simulation numérique des écoulements à surface libre; École Mohammed d'ingénieurs, Rabat, Maroc
Barrah, John Bosco (Cameroun)
Cours de formation en aquaculture intégrée; Freshwater Fisheries Research Centre, Regional Lead Centre in China, Wuxi, Chine

- Dix scientifiques d'Afrique et d'Amérique latine ont participé à un atelier sur la mise sur pied de petites entreprises de valorisation des substances extraites de plantes indigènes.
- Des spécialistes d'un développement industriel durable et respectueux de l'environnement en provenance du Brésil, de l'Inde, de la Chine et du Zimbabwe ont pu se réunir.
- Un atelier sur les aspects humains du changement en Amérique latine a rassemblé de nombreux spécialistes de plusieurs pays et provenant de diverses disciplines des sciences sociales.
- Des scientifiques africains se sont réunis au Swaziland pour discuter de la mise en place de programmes agroforestiers rentables et durables.
- Une étude de l'assèchement du Lob Nor, le plus grand lac de la province chinoise du Xinjiang, a été organisée, comprenant visite sur le terrain, afin d'étudier comment enrayer le processus de désertification de la région.
- Deux éminents spécialistes africains de l'agroforesterie ont participé, en Inde, à un atelier international sur le bambou afin d'explorer les façons d'en améliorer les rendements en Afrique.

Projets préliminaires des divisions

domaine des sciences sociales sur les questions touchant les femmes ou le rôle des sexes. 195 000 \$ — 24 mois.

Outre les activités énumérées dans les pages précédentes, le CRDI subventionne de nombreux projets, relativement modestes, pour appuyer d'une façon ou d'une autre les activités en cours des divisions. Il peut s'agir, par exemple, de financer des ateliers ou des séminaires sur les priorités de la recherche dans une région ou dans un domaine particulier, de permettre à des chercheurs de pays en développement de participer à des réunions d'experts dans différentes parties du monde ou, encore, de donner l'occasion à un spécialiste de visiter et de secondier l'équipe d'un projet dans un autre pays. Par ailleurs, des fonds sont aussi à la disposition des directeurs des bureaux régionaux pour financer des initiatives régionales.

La plupart des projets préliminaires couvrent les coûts de réunions ou de consultations qui sont, directement ou indirectement, reliés aux recherches financées par le CRDI. Au cours de l'année financière écoulée, le CRDI a approuvé des projets préliminaires pour un coût total de 8,5 millions de dollars. En voici quelques exemples :

- En Thaïlande, deux séminaires ont été organisés afin de déterminer les meilleures façons de protéger les producteurs agricoles contre les pesticides dangereux.
- Un consultant a collecté et analysé toute l'information disponible sur les boursiers Pearson afin d'évaluer ce programme.
- Dans le cadre d'une vaste étude de l'impact des problèmes du Sud sur le Nord, un universitaire canadien a étudié les conséquences des activités des pays en développement sur l'environnement planétaire.
- Un consultant a effectué un voyage d'étude en Inde afin de déterminer comment les organisations non gouvernementales pouvaient mettre à profit les techniques des sciences de l'information au bénéfice des populations démunies.
- Un atelier, organisé en Indonésie, a permis de se mettre d'accord sur des recommandations permettant de promouvoir l'information et l'éducation sur le SIDA auprès du public et des professionnels de la santé.

Universidade Federal da Paraíba, Universidade Federal do Rio Grande do Sul, Brésil, Ministère de l'Agriculture, Tunisie, et Université du Québec à Rimouski. Étudier les mécanismes d'adaptation et d'exploitation des femmes familiales en Tunisie, au Brésil et au Canada. 125 100 \$ — 36 mois.

88-1023 Hydraulique villageoise, animation et participation communautaire (Togo-Canada)
Université du Bénin, Togo, et Université du Québec à Hull. Étudier le processus d'implantation du projet d'hydraulique villageoise PHV-CUSO, raffiner les méthodes de vulgarisation réalisées par CUSO et favoriser la participation des populations bénéficiaires du PHV aux différentes phases de réalisation du projet. 80 900 \$ — 24 mois.

88-1025 Réseau sur les politiques industrielles et les incitations sectorielles (Afrique centrale et occidentale-Canada)*
Conseil pour le développement de la recherche économique et sociale en Afrique, Sénégal, et Université de Montréal, Québec. Accroître la capacité des pays africains d'analyser les mesures de politique économique auxquelles ont recours les gouvernements africains lorsqu'ils procèdent à l'ajustement structurel de leur économie. 1 356 000 \$ — 36 mois.

88-1026 Modes de transport économiques à Ningho (Chine-Canada)*
Université Tongji, Chine, et Université de Calgary, Alberta. Évaluer comment les moyens de transport peu coûteux répondent aux besoins des populations urbaines. 236 200 \$ — 25 mois.

88-1042 L'utilisation du sol et la production alimentaire (République dominicaine-Canada)
Universidad Católica Madre y Maestra, Santiago de los Caballeros, et Université de Sherbrooke, Québec. Cerner les interrelations entre les différents systèmes d'utilisation du sol et établir le potentiel de production alimentaire locale selon divers scénarios d'évolution. 349 550 \$ — 36 mois.

88-1055 Institut de cours d'été sur le rôle des sexes et le développement (Gloбал) — Phase II
Université Dalhousie, Aider les étudiants à cerner des sujets de recherche, à se pencher sur les débats et les progrès méthodologiques et à analyser les publications et les modèles actuels concernant les femmes et le développement, afin d'améliorer leur aptitude à mener ou à superviser des recherches de grande qualité dans le

88-0392 Les mères et la transformation des rapports entre les sexes (Argentine)*
Grupo de Estudios Sociales para la Transformación, Buenos Aires. Examiner le processus de négociation entre les hommes et les femmes au sein des familles et d'analyser ses effets à long terme sur les jeunes adultes qui proviennent de ces familles. 67 300 \$ — 12 mois.

88-0398 Travail de la femme et ajustement structurel (Amérique latine et les Antilles)
International Center for Research on Women, États-Unis. Analyser les effets de la récession des politiques d'ajustement sur la vie des femmes en Amérique latine et dans les Antilles par suite de la crise de la dette; recueillir des données qui aideront les décideurs à établir des plans à court terme en fonction des réactions face au travail de la femme; et formuler de nouvelles politiques visant à minimiser les effets sociaux négatifs de l'ajustement économique dans la région. 71 860 \$ — 18 mois.

88-0404 Le marché foncier urbain à Cuenca et Machala (Équateur)*
Corporación de Estudios Regionales, Guayaquil. Étudier le fonctionnement du marché foncier dans les villes de Cuenca et Machala. 33 800 \$ — 12 mois.

88-0406 Droit statutaire, droit coutumier et usages ruraux (Thaïlande)*
Université Chiang-Mai. Examiner comment sont appliqués le droit statutaire et le droit coutumier, leurs rapports avec les tendances de la participation politique des femmes des régions rurales du nord de la Thaïlande. 34 980 \$ — 24 mois.

88-1007 Ajustement structurel et libéralisation financière (Tunisie-Canada)
Université de Tunis et Université de Montréal, Québec. Analyser et évaluer pour la Tunisie, des questions et des options de politique économique où les aspects macroéconomique, monétaire et financier prédominent. 349 944 \$ — 36 mois.

88-1008 Fermes familiales (Brésil-Tunisie-Canada)*
Universidade Estadual de Campinas,

- 88-0331 Formulation d'un plan de développement technologique à moyen terme (Malaisie)***
Ministry of Science, Technology and Environment, Kuala Lumpur. Passer en revue la politique actuelle de la Malaisie en matière de science et de technologie et recommander un nouveau plan scientifique et technologique à long terme pour le pays. 218 370 \$ — 18 mois.
- 88-0332 Pêches artisanales (Kenya) — Phases II**
University of Nairobi. Étudier les secteurs de la pêche artisanale et de la pêche commerciale sur le Lac Victoria en tant qu'activités parallèles et de l'hypothèse selon laquelle, moyennant des interventions technologiques et institutionnelles appropriées, le secteur artisanal peut non seulement survivre à la menace posée par le secteur commercial, mais également permettre l'amélioration des conditions de vie de ceux qui y travaillent, absorber davantage de main-d'œuvre et soutenir la concurrence des exportations. 80 000 \$ — 36 mois.
- 88-0333 Recherche et formation en population et développement (Égypte) — Phase V**
Population Council, E.-U. Définir et analyser les problèmes du développement qui sont reliés à des questions démographiques dans le Moyen-Orient; définir et renforcer les capacités individuelles, institutionnelles et nationales en matière de recherche sur la population et le développement. 230 900 \$ — 24 mois.
- 88-0335 Enseigner et étudier dans les écoles aymaras urbaines (Bolivie)**
Centro Boliviano de Investigación y Acción Educativa, La Paz. Étudier les méthodes d'enseignement et d'apprentissage dans les écoles aymaras urbaines, en vue de déterminer et d'évaluer les variables qui entravent ou qui favorisent la capacité des enfants bilingues d'apprendre à lire et à écrire. 102 700 \$ — 30 mois.
- 88-0336 Promotion de la micro-entreprise dans les écoles secondaires (Thaïlande)**
Office of the National Education Commission, Bangkok. Permettre à sa Research Division d'analyser et de mettre au point un modèle approprié de formation pour la promotion des micro-entreprises dans les écoles secondaires thaïlandaises, et ainsi aider les élèves à travailler à leur compte. 177 700 \$ — 45 mois.
- 88-0345 Secteur des petites entreprises (Ouganda)***
Ministry of Planning and Economic Development, Kampala. Permettre au National Economic Council d'étudier le rôle des petites entreprises dans
- 88-0346 Réinstallation des populations déplacées de la commune de Tombouctou (Mali)***
Municipalité de Tombouctou. Aider à la réinstallation des communautés rurales, restituer des communautés rurales, contribuer à la sauvegarde de l'environnement, apporter une contribution à la recherche de l'autosuffisance alimentaire, donner une orientation à la politique de sédentarisation des nomades, et définir de façon plus précise et réaliste la lutte contre la désertification. 156 400 \$ — 12 mois.
- 88-0348 Gestion urbaine (Nigéria)***
Nigerian Institute of Social and Economic Research, Ibadan. Déterminer les ressources financières et humaines dont ont besoin les autorités locales du Nigéria pour s'acquitter des responsabilités prévues dans la constitution. 77 300 \$ — 18 mois.
- 88-0352 Effet de la réinstallation des réfugiés (Zambie)***
University of Zambia, Lusaka. Permettre à l'Institute of African Studies d'examiner les conséquences à long terme, pour les réfugiés, des processus d'auto-sédentarisation et de sédentarisation planifiée, et l'impact, sur les réfugiés, des conditions matérielles d'existence et de la sécurité physique des populations d'accueil. 110 000 \$ — 12 mois.
- 88-0358 Programme de formation à la recherche action (Indonésie)**
Sebelas Maret University, Surakarta. Permettre au Research Centre de mettre sur pied un programme efficace de formation à la recherche action qui sera utilisé dans la formation des travailleurs indonésiens du développement en travailleur. 142 000 \$ — 33 mois.
- 88-0360 Programme d'éducation en population à l'Université d'Al Azhar (Égypte)**
Université d'Al Azhar, Le Caire. Permettre au International Islamic Center for Population Studies and Research de faire un sondage qui permettra de déterminer les connaissances et attitudes des étudiants musulmans de l'université au sujet de la population et des tendances démographiques, et d'étudier les programmes (théologiques et scientifiques) en vue de définir leur contenu axé sur les questions démographiques, ou devenir des cours distincts. 26 900 \$ — 12 mois.
- 88-0364 Migration et urbanisation : le cas de Douala et Yaoundé (Cameroun)***
Direction nationale du deuxième recensement général de la population et de l'habitat, Yaoundé. Permettre aux autorités de disposer des informations nécessaires aux prises de décision. 208 100 \$ — 24 mois.
- 88-0374 Éducation et transformation industrielles chez les Indiens des Andes***
Centro Andino de Acción Popular. Étudier des effets de l'éducation sur les cultures et les connaissances traditionnelles des Indiens, et établir un mécanisme permettant de relier les chercheurs et les institutions, de diffuser les résultats de la recherche et de renforcer les capacités de recherche dans les pays andins. 190 500 \$ — 36 mois.
- 88-0376 Accès aux terres par les femmes des régions rurales (Tanzanie)***
Université de Dar es-Salaam. Examiner la situation des femmes en régions rurales (Far), où la propriété foncière est régie à la fois par le droit coutumier et le droit civil. 29 800 \$ — 30 mois.
- 88-0377 Nouveaux modes d'établissement à Narmada (Inde)***
Institute of Regional Analysis, Bhopal. Évaluer l'impact socio-économique, culturel et écologique du projet de barrage de Narmada sur les zones de peuplement de la région et, de concert avec les populations qui seront vraisemblablement appropriées pour faciliter le processus de transformation et en réduire les aspects négatifs. 237 000 \$ — 36 mois.
- 88-0379 Sécurité alimentaire rurale (Zimbabwe)***
University of Zimbabwe, Harare. Permettre au Department of Economics d'étudier la contradiction apparente entre l'accroissement des surplus alimentaires mis en marché au Zimbabwe et l'insécurité alimentaire et la malnutrition qui continuent de se manifester dans certaines régions communales. 206 500 \$ — 30 mois.
- 88-0389 Réseau sur l'éducation et le travail (Amérique latine)***
Centro de Estudios de Población, Argentine. Concevoir, mettre en œuvre et coordonner un mécanisme régional regroupant des chercheurs et des instituts de recherche travaillant dans les domaines de l'éducation et du travail. Le réseau aura pour but de faciliter l'échange d'information sur les résultats des recherches, de réaliser des travaux en collaboration, de préparer des analyses et des évaluations et de cerner des secteurs problèmes pour les recherches futures. 65 800 \$ — 24 mois.

- 88-0204 Les politiques des langues nationales dans les systèmes éducatifs (Burkina Faso-Côte d'Ivoire-Guinée-Mali-Mauritanie-Sénégal)***
Ministère de l'Enseignement de base et de l'Alphabétisation de masses, Burkina Faso, Université d'Abidjan, Côte d'Ivoire, Département de l'Éducation nationale, Guinée, ministre de l'Éducation nationale, Mali, ministre de l'Éducation nationale, Mauritanie, et Université de Dakar, Sénégal. Évaluer la politique d'utilisation des langues nationales dans le système éducatif de chaque pays; proposer de nouvelles stratégies pour ces langues nationales; et faire une synthèse comparative. 394 900 \$ — 24 mois.
- 88-0210 Reconstruction après l'ouragan (Jamaïque)**
University of the West Indies, Mona. Remplacer l'équipement acheté à l'origine grâce à des subventions du CRDI et financer environ six projets de recherche urgents visant à régler des problèmes entravés par l'ouragan dans les domaines de la santé, de l'agriculture, de la nutrition et des sciences sociales. 675 000 \$ — 24 mois.
- 88-0218 Éducation et structure sociale : participation sociale et politique d'éducation (Chili) — Phase IV**
Programa Interdisciplinario de Investigaciones en Educación, Santiago. Entreprendre un programme de recherche faisant appel à des intervenants sociaux comme les enseignants et les parents, afin d'étudier les aspects de l'administration du système social qui influencent la participation sociale. 143 000 \$ — 18 mois.
- 88-0225 Organisation du pouvoir communautaire (Nicaragua)***
Instituto de Investigaciones Económicas y Sociales, Managua. Évaluer l'efficacité des comités de défenses sandinistas à titre besoins de la population et d'intervenants dans les processus d'adoption et de mise en œuvre de politiques de développement. 54 750 \$ — 24 mois.
- 88-0237 Restructuration du secteur industriel (Uruguay) — Phase II**
Centro de Investigaciones Económicas, Montevideo. Définir et évaluer les principales options en matière de stratégies industrielles et de politiques de développement économique pour le pays. 180 430 \$ — 24 mois.
- 88-0249 CODESRIA : aide institutionnelle (Afrique) — Phase V**
Conseil pour le développement de la recherche économique et sociale en Afrique (CODESRIA), Sénégal. Permettre au CODESRIA de poursuivre un certain nombre d'activités à l'appui de la recherche fondamentale et appliquée en sciences sociales en Afrique, et accroître les compétences du CODESRIA, pour qu'il puisse poursuivre lui-même de telles activités à l'avenir. 1 016 330 \$ — 36 mois.
- 88-0250 Industrialisation rurale en Asie**
Kasetsart University, Thaïlande, University of Sri Lanka, Mesurer l'offre et la demande de main-d'œuvre non agricole dans des régions désignées de développement régional de l'Asie du Sud et du Sud-Est, en vue d'harmoniser cette main-d'œuvre aux ressources de ces régions de même qu'à la demande éventuelle de produits. 239 000 \$ — 24 mois.
- 88-0259 Appui d'un réseau : recherche qualitative thématique**
Chulalongkorn University, Bangkok. Renforcer les capacités de la Thaï Association of Qualitative Researchers d'assurer une formation efficace en matière de recherche qualitative et promouvoir l'utilisation d'une telle méthodologie dans la recherche sur le développement communautaire. 166 000 \$ — 30 mois.
- 88-0277 Désastres naturels et zones à risque en Amérique centrale**
Consejo Superior Universitario Centroamericano, Costa Rica. Développer des mesures de prévention adéquates face aux désastres naturels que connaît la région centraméricaine. 289 200 \$ — 17 mois.
- 88-0278 L'efficacité de l'enseignement et la relation enseignant-élève (Costa Rica)**
Universidad de Costa Rica, San José. Permettre à l'Instituto de Investigación para el Mejoramiento de la Educación Costarricense d'examiner les facteurs qui déterminent les niveaux d'efficacité du processus d'enseignement-apprentissage au Costa Rica, en vue de définir un programme permettant d'améliorer la qualité de l'éducation dans les régions urbaines marginales du Costa Rica et d'autres pays de l'Amérique centrale. 72 500 \$ — 36 mois.
- 88-0297 Éducation des ouvriers et participation aux syndicats (Chili)**
Centro de Estudios Sociales, Santiago. Examiner différentes expériences d'éducation syndicale menées au Chili au cours des dix dernières années, en vue d'en évaluer la pertinence à titre d'innovations dans le domaine de l'éducation des adultes et d'analyser leur concordance avec les objectifs des
- 88-0311 Participation économique et migration (Népal)***
Center for Women in Development, Kamandou. Évaluer l'impact de la migration sur la participation économique des femmes népalaises et sur le développement national en général. 84 500 \$ — 18 mois.
- 88-0315 Revenu et emploi en milieu rural (Botswana)***
University of Botswana, Gaborone. Permettre au Department of Economics de faciliter la diversification et la croissance de l'économie rurale au Botswana en comprenant mieux l'impact de la gamme des politiques touchant le mouvement des revenus ruraux. 50 600 \$ — 18 mois.
- 88-0319 Exploitation forestière et environnement (Uruguay)**
Centro Interdisciplinario de Estudios sobre el Desarrollo, Montevideo. Examiner des utilisations nouvelles des ressources naturelles de l'Uruguay de même que les changements qu'elles entraîneraient probablement dans l'environnement; et la gamme des facteurs techniques, sociaux et politiques qui déterminent comment ces ressources sont gérées. 100 950 \$ — 20 mois.
- 88-0322 Terres, droit et politique (Ouganda)***
Makerere University, Kampala. Permettre au Makerere Institute of Social Research et à la Faculté de droit d'examiner les limites du système de contrôle des terres ougandaises par l'État en vertu de la *Land Reform Law of 1975*. 134 400 \$ — 36 mois.
- 88-0325 Agriculture urbaine à Kampala (Ouganda)***
Makerere University, Kampala. Permettre au Makerere Institute of Social Research et au Department of Agricultural Economics d'étudier l'organisation de l'agriculture urbaine à Kampala. 4 800 \$ — 12 mois.
- 88-0328 Sous-marchés non réglementés du logement urbain (Kenya)***
University of Nairobi. Permettre au Department of Land Development d'étudier l'organisation commerciale et le fonctionnement des sous-marchés du logement dans trois centres urbains; d'analyser l'évolution des nouveaux systèmes de propriété et d'exploitation foncières dans les zones de peuplement non planifiées; de mettre au point une méthode de prévision de la croissance des zones non contrôlées et de l'évolution des sous-marchés du logement en vue de l'adoption des lignes directrices en vue de proposer les meilleures stratégies de logement pour les pauvres en milieu urbain. 112 200 \$ — 24 mois.

Permettre au Research Centre for Nepal and Asian Studies de définir des stratégies à court et à moyen terme pour le développement des régions reculées du Népal. 183 800 \$ — 24 mois.

88-0170 Formation et aide des enseignants dans les écoles (Indonésie) Ministry of Education and Culture, Jakarta. Permettre à l'Office of Educational and Cultural Research and Development d'étudier l'implantation, les répercussions et la diffusion du système de soutien professionnel dans les écoles primaires de l'Indonésie. 215 000 \$ — 27 mois.

88-0172 L'auto-médication chez les pauvres en milieu urbain (Pérou) Centro Latinoamericano de Trabajo Social, Lima. Établir une méthodologie qui permettra d'étudier les consultations médicales qui se font dans les pharmacies des quartiers populaires de Lima; générer des connaissances sur les répercussions de ces consultations; et préparer des recommandations en matière de politique de santé publique. 38 500 \$ — 12 mois.

88-0179 Relations sociales et conditions économiques des femmes rurales (Inde) Centre for Social Research, New Delhi. Analyser les changements socio-structurels survenus dans les ménages ruraux suite au développement. 85 960 \$ — 24 mois.

88-0186 Hygiène professionnelle et éducation dans les collectivités rurales (Pérou) Huayana Instituto de Promoción y Desarrollo, Lima. Étudier les effets toxiques des pesticides et des défoliants sur les travailleurs agricoles du Pérou et évaluer les changements susceptibles d'être apportés par l'éducation et par la création d'un système de surveillance épidémiologique. 200 000 \$ — 48 mois.

88-0198 Utilisation des résultats des recherches en sciences sociales (Amérique latine) Facultad Latinoamericana de Ciencias Sociales, Chili. Réaliser une série d'études de cas et de recherches qui contribueront à mieux faire connaître le processus d'utilisation des connaissances produites par la recherche sociale, et définir des initiatives qui favoriseront le recours à ce système. 235 000 \$ — 36 mois.

88-0200 Réseau sur les femmes et la gestion des ressources naturelles (Afrique) Environment Liaison Centre, Kenya. Mettre en lumière les connaissances des femmes au sujet de l'environnement, en appuyant une série d'études sur les femmes et la gestion des ressources naturelles en Afrique. 753 100 \$ — 36 mois.

88-0153 Participation à la population active (Paraguay) Centro Paraguayo de Estudios Sociológicos, Asunción. Permettre au Grupo de Estudios de la Mujer Paraguaya de cerner le profil des travailleuses du Paraguay. 77 230 \$ — 18 mois.

88-0156 Habitat populaire et développement communautaire (Pérou) Centro de Estudios para el Desarrollo Regional, Arequipa. Favoriser l'entraide communautaire parmi les habitants des colonies de squatters connues sous le nom de Cono Norte, et ainsi les aider à financer, à organiser et à construire leurs propres logements en s'aidant mutuellement. 108 400 \$ — 24 mois.

88-0158 Stratégies de survie à la sécheresse et à la famine (Soudan)* Economic and Social Research Council, Khartoum. Déterminer les stratégies adoptées par les ménages face à la sécheresse dans dix collectivités pastorales et dix collectivités agricoles de la province de Darfour et évaluer les répercussions de ces stratégies sur la résistance générale des ménages à toute sécheresse future. 62 200 \$ — 18 mois.

88-0159 Analyse de la situation des diplômés des écoles techniques (Bhoutan) Instituto de Investigaciones Socio-Económicas y Tecnológicas, Quito. Analyser la situation des diplômés en agriculture et en industries des écoles secondaires techniques au cours des cinq dernières années. 78 600 \$ — 18 mois.

88-0161 Intégration des femmes au développement industriel (Kenya) Centre for Action Research, Nairobi. Élaborer une méthode et un ensemble d'outils de recherche qui permettront d'étudier la situation de l'emploi des femmes dans le secteur agro-industriel de l'économie. 14 400 \$ — 12 mois.

88-0163 Petites entreprises associatives (Pérou) Instituto Peruano de Empresas de Propiedad Excluyente de Trabajadores, Lima. Réaliser une étude de faisabilité pour l'implantation de petites entreprises industrielles communautaires dans la collectivité de Villa El Salvador, au sud de Lima. 23 800 \$ — 12 mois.

88-0166 Éducation rurale intégrée assurée par la communauté (Mexique) Centro de Estudios Educativos, Mexico. Élaborer, mettre en oeuvre et évaluer un programme d'éducation qui remédiera aux effets négatifs des échecs scolaires et sera plus adapté aux besoins du Mexique rural. 190 000 \$ — 34 mois.

88-0169 Stratégies de développement des régions reculées (Népal)* Tribhuvan University, Katmandou.

88-0123 Réseau sur la consommation d'énergie et la pollution de l'air dans les villes (Asie) Tsing Hua University, Chine, University of Hong Kong, Systems Research Institute, Inde, University of the Philippines et Chulalongkorn University, Thaïlande. Favoriser une meilleure compréhension des modèles de consommation d'énergie domestique dans le contexte de l'urbanisation de l'Asie du Sud et du Sud-Est et explorer les liens entre ces modèles et l'exposition à la pollution de l'air dans plusieurs grandes villes de la région. 445 130 \$ — 24 mois.

88-0124 Développement régional et minorités autochtones en Asie du Sud-Est* Universiti Malaysia, Kuala Lumpur, Thai University Research Institute, Bangkok, Mountain People's Culture and Development Centre, Thaïlande, et Montanos Research and Development Centre, Philippines. Étudier les répercussions des programmes de développement régional sur les minorités autochtones en Thaïlande, en Malaisie et aux Philippines. 258 800 \$ — 24 mois.

88-0128 Éducation technique et emploi (Inde) Gujarat Research Society, Bombay. Poursuivre les travaux précédents sur la relation entre l'éducation technique et l'emploi, afin d'améliorer la formation technique dispensée aux femmes dans les Industrial Training Institutes. 43 000 \$ — 14 mois.

88-0136 Adaptation de la méthode d'enseignement Montessori au niveau préscolaire (Philippines) Zonta International Club et Bicol Institute of Development Technology, Manille métropolitaine. Examiner l'efficacité de la méthode d'enseignement préscolaire Montessori dans les milieux défavorisés et adaptée pour les enseignants, les parents et les leaders communautaires. 61 000 \$ — 12 mois.

88-0141 Stratégies de logement urbain (Lesotho)* National University of Lesotho, Roma. Permettre à l'Institute of Extra-Mural Studies d'étudier les conditions de logement des ménages dirigés par des femmes et de faire des recommandations visant leur amélioration. 15 460 \$ — 16 mois.

88-0147 Formation SPSS (Afrique centrale et occidentale) Direction de la statistique, Sénégal. Offrir une formation de courte durée à l'utilisation du logiciel de micro-ordinateur SPSS aux chercheurs travaillant à des projets financés par le CRDI. 132 387 \$ — 3 mois.

- 88-0077 Marchés financiers et inflation (Argentine) — Phase IV**
Centro de Estudios de Estado y Sociedad, Buenos Aires. Analyser et évaluer l'impact du Plan austral sur l'épargne, l'investissement et les finances. 138 350 \$ — 24 mois.
- 88-0078 La culture politique et l'État en Amérique centrale**
Universidad de Costa Rica, San José. Définir les questions et priorités en matière de recherche pour son programme de maîtrise en sociologie de l'Amérique centrale dans deux secteurs : culture politique et rôle changeant de l'État. 40 000 \$ — 12 mois.
- 88-0080 Les associations d'affaires et les politiques publiques en Amérique centrale**
Facultad Latinoamericana de Ciencias Sociales, Costa Rica. Décrite et analyser l'évolution, la structure et le rôle des associations d'affaires en Amérique centrale. 28 000 \$ — 6 mois.
- 88-0082 Répertoire recherche et développement sur l'environnement (Nigéria) ***
Nigerian Environmental Study Team, Ibadan. Formuler une politique de recherche et développement et un plan d'action concernant l'environnement au Nigéria. 66 920 \$ — 18 mois.
- 88-0086 Enfant à enfant (Inde)**
Fondation Aga Khan, Suisse. Décrite le mécanisme d'implantation et de mesurer l'impact de chacun des sept projets pilotes enfant à enfant subventionnés par la Fondation en Inde. 67 000 \$ — 24 mois.
- 88-0088 Princes et conseillers : le rôle des techniciens dans la formulation de politiques (Chili)**
Instituto Latinoamericano de Estudios Transnacionales, Santiago. Étudier le rôle des fonctionnaires dans la gestion de l'appareil d'État et dans la formulation des politiques sociales nationales. 107 360 \$ — 24 mois.
- 88-0089 Développement des petites industries (Thaïlande)**
Economic Society of Thailand, Bangkok. Permettre à la Thammasat University d'étudier les petites industries en Thaïlande, et particulièrement le rôle qu'elles jouent dans le développement régional et la promotion des exportations. 68 500 \$ — 24 mois.
- 88-0090 Les entreprises de services en Malaisie**
Université Malaya, Kuala Lumpur. Permettre à la Faculty of Economics and Administration d'offrir des données nouvelles et utiles sur les entreprises de services en Malaisie aux planificateurs du gouvernement, aux décideurs de
- 88-0066 Équilibre entre le secteur public et le secteur privé (Gloбал)**
Organisation de coopération et de développement économiques, France. Étudier les rôles changeants du secteur public et du secteur privé, en mettant particulièrement l'accent sur l'Argentine, la Bolivie, le Cameroun et le Ghana. 76 780 \$ — 15 mois.
- 88-0067 Utilisation des ressources naturelles et diffusion de la technologie dans les régions rurales du Mexique**
Grupo Interdisciplinario de Tecnología Rural Apropiada, Mexico. Étudier les tendances de l'utilisation des ressources naturelles (bois et eau) et de la diffusion de technologies nouvelles (cuisinières et dispositifs de collecte de l'eau) dans une collectivité rurale Chermanizicun, afin de contribuer à l'amélioration des politiques et programmes de développement rural. 149 150 \$ — 24 mois.
- 88-0074 Coopératives (Burkina Faso)**
Université de Ouagadougou. Permettre au Centre d'études, de documentation et de recherche économique et sociale (CEDRES) d'analyser le rôle possible de trois types de coopératives (groupements villageois, coopératives agricoles et caisses d'épargne et d'économies) dans le développement rural, et de renforcer les capacités de recherche et de formation du CEDRES. 103 000 \$ — 36 mois.
- 88-0075 Réforme de la politique alimentaire (Nicaragua) ***
Universidad Centroamericana, Managua. Entreprendre une analyse comparative des conditions économiques et politiques qui se sont traduites par des réformes de la politique alimentaire dans certains pays socialistes dans les années 80, en vue d'analyser en profondeur l'impact de ces réformes au Nicaragua. 30 910 \$ — 24 mois.
- 88-0076 Affectation des ressources, éthique et éducation (Sri Lanka)**
International Centre for Ethnic Studies, Colombo. Recommander des formules d'affectation des ressources à l'éducation dans la province centrale du pays de façon à améliorer les relations ethniques. 45 800 \$ — 12 mois.
- 88-0101 Libéralisation du marketing agricole (Nigéria) ***
Université d'Ibadan. Permettre au Department of Economics d'examiner les effets de la politique de libéralisation sur le système nigérian d'établissement des prix et de mise en marché des produits agricoles, et donc sur la capacité de répondre de façon efficace et efficiente aux besoins des petits agriculteurs. 91 210 \$ — 24 mois.
- 88-0106 Politique du marketing des aliments (Afrique orientale et australe)**
Université d'Oxford, Royaume-Uni. Permettre au International Development Centre d'analyser l'effet de la libéralisation des marchés des aliments en Afrique orientale et australe et les obstacles à l'application de diverses réformes en matière de politique. 86 700 \$ — 24 mois.
- 88-0112 Recherche macroéconomique (Brésil) — Phase IV**
Pontificia Universidade Católica do Rio de Janeiro. Analyser les effets des politiques macroéconomiques visant à résoudre le problème du déficit du secteur public, selon divers scénarios à court et à moyen terme. 139 300 \$ — 24 mois.
- 88-0118 Projections démographiques : 1985-2010 (Colombie)**
Departamento Administrativo Nacional de Estadística, Bogotá. Compiler les données démographiques de 1951 à 1985 pour évaluer les statistiques de l'état civil et faire des projections des tendances démographiques futures en Colombie. 13 360 \$ — 5 mois.
- 88-0121 Service de soutien technique au Groupe des vingt-quatre (Gloбал) ***
Conférence des Nations Unies sur le commerce et le développement, Suisse. Aider les pays en développement en mettant à leur disposition des études et des données techniques sur les questions internationales qui sont en voie de négociation ou seront présentées pour décision au Comité intermédiaire du Fonds monétaire international (FMI), au Comité conjoint de développement du FMI et de la Banque internationale pour la reconstruction et le développement (BIRD) et à d'autres organismes. 236 890 \$ — 26 mois.

Sciences sociales

de CARIRI à promouvoir l'utilisation et l'application de l'information technique et industrielle comme intrant dans le reglement des problèmes techniques et administratifs; et établir l'infrastructure d'un service de diffusion de l'information industrielle en mesure de surveiller continuellement l'évolution des besoins techniques de l'industrie. 221 420 \$ — 24 mois.

88-0002 Etudes du secteur manufacturier (Kenya) — Phase II
University of Nairobi. Permettre au Department of Economics de rassembler de l'information sur les aspects de l'industrie du Kenya non couverts dans la Phase I; d'examiner les pratiques d'établissement des prix de gros et de détail et les coûts du transport maritime et aérien; et d'explorer les possibilités d'accroissement du commerce offertes par les tarifs préférentiels pour l'Afrique orientale et australe. 46 000 \$ — 12 mois.

88-0005 Technologie dans l'industrie des huiles végétales (Nigeria)
Ahmadu Bello University, Zaria. Explorer divers moyens de revivifier l'industrie nigériane des huiles végétales. 32 960 \$ — 18 mois.

88-0006 Choix de politique économique (Costa Rica)
Instituto Centroamericano de Administración de Empresas, Alajuela. Créer un modèle d'équilibre général de l'économie costariécienne aux fins de l'analyse des politiques. 99 040 \$ — 12 mois.

88-0031 Etude de l'emploi des contraceptifs (Gambie)
Gambia Family Planning Association, Banjul. Etudier les divers facteurs liés à l'acceptation et à l'utilisation des contraceptifs chez les clients des cliniques. 63 100 \$ — 26 mois.

88-0048 L'infantile et l'abandon des bébés (Zimbabwe)
Committee for Abandoned Babies, Harare. Recueillir des données sur le milieu social et économique des femmes accusées d'infanticide et d'abandon d'enfant; examiner les circonstances de ces actes; et étudier les moyens de rejoindre les Zimbabwéennes à l'aide de programmes d'éducation ou de réadaptation. 99 200 \$ — 18 mois.

88-0054 Réussites et échecs dans l'industrie forestière (Cameroun)
École supérieure des sciences économiques et commerciales, Douala. Etudier les facteurs d'échec ou de réussite

d'information agricole du Burkina Faso, notamment par l'informatisation des données bibliographiques du CNDIA et par le renforcement des composantes du réseau. 141 400 \$ — 24 mois.

88-0371 Manuel FAMESA sur les systèmes d'information en science, technologie et gestion (Afrique)
Centre international de la physiologie et de l'écologie des insectes, Kenya. Rédiger un manuel sur les systèmes intégrés d'information à l'intention des administrateurs de la recherche et des gestionnaires de la R et D. 201 800 \$ — 30 mois.

88-0390 Centre d'information sur le bambou (Inde)*
Kerala Forestry Research Institute, Pechchi. Créer un centre d'information sur le bambou ayant pour rôle d'organiser et de diffuser les données de recherche recueillies dans le pays. 119 000 \$ — 36 mois.

88-0411 Système d'information-communication au service des collectivités rurales (Philippines)*
Institut international pour la reconstruction rurale, Cavite. Mettre à l'essai une série de stratégies faisant appel à des modes de communication itérative pour déterminer les besoins en matière d'information sur le développement des familles rurales pauvres des Philippines. 199 000 \$ — 36 mois.

88-1009 Les langues écrites de la Chine (Chine-Canada)
Institute of Nationality Studies, Beijing, et Université Laval, Québec. Permettre à la Chinese Academy of Social Sciences et au Centre international pour la recherche sur le bilinguisme de fournir au gouvernement chinois l'information scientifique nécessaire pour le guider dans la formulation et l'implantation d'une politique de planification des langues. 230 000 \$ — 24 mois.

88-1010 Enseignement de l'information documentaire (Maroc-Sénégal-Canada)*
École des sciences de l'information, Maroc, Université Cheikh Anta Diop, Sénégal, et Université de Montréal, Québec. Améliorer la qualité de l'enseignement de l'information à l'intention des bibliothécaires, archivistes et documentalistes dans leur école respective et jeter les bases d'un programme permanent de coopération et d'échanges entre les trois écoles. 349 000 \$ — 36 mois.

88-1038 Information industrielle et communication (CARIRI-Canada)
Institut de recherche industrielle des Caraïbes (CARIRI), Trinité-et-Tobago, et Centre de recherche industrielle du Québec, Sainte-Foy. Renforcer la capacité

d'information agricole du Burkina Faso, notamment par l'informatisation des données bibliographiques du CNDIA et par le renforcement des composantes du réseau. 141 400 \$ — 24 mois.

88-0347 Centre de ressources MINISIS (Afrique de l'Ouest)
Organisation africaine de la propriété intellectuelle, Cameroun. Établir un centre de ressources MINISIS qui fera la promotion active du MINISIS (Système bidirectionnel de miniorinaire pour le repérage de l'information et la gestion des bibliothèques) et dispensera une formation à un soutien directs aux utilisateurs dans la région. 224 380 \$ — 36 mois.

88-0354 Système de documentation et d'information sur les transports (Sénégal)*
Ministère de l'Équipement, Dakar. Permettre à la Direction des études et de la programmation de mettre en place un centre de coordination de la composante documentaire et d'information sur les transports. 101 790 \$ — 24 mois.

88-0356 Réseau national d'information scientifique et technologique (Chana)*
Council for Scientific and Industrial Research, Accra. Mettre en place un réseau national viable chargé de l'identification, de la collecte, du stockage, de la saisie, de la réorganisation et de la diffusion rapide d'information scientifique et technologique à l'intention des chercheurs et décideurs du gouvernement, des industries et fabricants des secteurs public et privé, des agriculteurs et des industries artisanales. 220 100 \$ — 24 mois.

88-0357 Communication des logements peux coûteux (Inde)*
Community Centre of Scientific Knowledge for Self-Reliance, France. Produire cinq modules d'information sur la construction de toitures à partir de ressources locales (compétences et matériaux) en tenant compte des facteurs climatiques. 55 100 \$ — 12 mois.

88-0361 Système national d'information agricole (Burkina Faso) — Phase II*
Ministère de l'Agriculture et de l'Élevage, Ouagadougou. Permettre au Centre (CNDIA) de consolider le système national

d'information agricole du Burkina Faso, notamment par l'informatisation des données bibliographiques du CNDIA et par le renforcement des composantes du réseau. 141 400 \$ — 24 mois.

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88-1038 Information industrielle et communication (CARIRI-Canada)
Institut de recherche industrielle des Caraïbes (CARIRI), Trinité-et-Tobago, et Centre de recherche industrielle du Québec, Sainte-Foy. Renforcer la capacité

- 88-0317 Recherche sur les terres hautes des Philippines***
University of the Philippines, Los Baños. Permettre à l'Institut de Environment Sciences and Management d'établir le profil de la recherche sur les terres hautes des Philippines; de mettre au point un système de classification de cette recherche en fonction des systèmes de classification utilisés dans d'autres régions (notamment l'Asie du Sud-Est et l'Asie-Pacifique); et de mettre sur pied une base de données de la recherche sur les terres hautes accompagnée d'une bibliographie annotée et d'un index de localisation des sources. 10 000 \$ — 15 mois.
- 88-0318 Réseau REDUC: appui à la gestion et à la technologie (Amérique latine)**
Centro de Investigación y Desarrollo de la Educación, Chili. Réorganiser, renforcer et élargir l'appui fourni aux membres du REDUC (Red Latinoamericano de Documentación en Educación), pour garantir que le réseau est au courant des derniers progrès dans les domaines de la technologie et de la gestion et mieux en mesure de répondre adéquatement aux demandes croissantes des utilisateurs. 240 000 \$ — 24 mois.
- 88-0320 Programme pilote de formation pour documentalistes en agriculture arabes (Afrique)**
Arab Organization for Agricultural Development, Soudan. Mettre sur pied un cours de recyclage à l'intention des documentalistes en agriculture arabes, qui pourront ainsi utiliser des méthodes normalisées de documentation en vue de faciliter l'échange d'information agricole et participant, le développement du Réseau arabe des systèmes d'information. 145 200 \$ — 36 mois.
- 88-0324 Information pour la recherche et la planification (Togo) — Phase II**
Ministère du Plan et des Mines, Lomé. Permettre au Centre de documentation technique d'informatiser et d'élargir les opérations documentaires du Centre afin d'accroître son rayonnement et préparer son rôle de coordinateur du futur réseau national d'information. 163 000 \$ — 36 mois.
- 88-0338 Système de documentation et d'information — ARCEDEM (Afrique)**
African Regional Centre for Engineering Design and Manufacturing (ARCEDEM), Nigéria. Mettre sur pied un centre de documentation qui permettra à l'ARCEDEM de tenir les pays membres au courant des progrès technologiques, par l'entremise des centres nationaux et d'autres établissements industriels dans la région. 192 500 \$ — 24 mois.
- cartographie du Centre for Policy Research et de la Planning Commission aux fins de l'analyse de l'évolution socio-économique de Bihar. 103 450 \$ — 24 mois.**
- 88-0280 Centre de ressources MINISIS (Inde)**
Shreemati Nabhai Damodar Thackersey Women's University, Bombay. Établir, à l'université même, un centre de ressources MINISIS qui offrira aux utilisateurs locaux de MINISIS (Système bidirectionnel de miniordinateur pour le repérage de l'information et la gestion des bibliothèques) des services plus directs et de meilleure qualité. 174 340 \$ — 36 mois.
- 88-0285 Système pilote d'information sur le bétail (Égypte)***
Cairo University. Permettre à son Collège of Agriculture de participer à la conception et à la mise au point, pour l'Égypte, d'un programme national d'amélioration du bétail en mesure de recueillir, de traiter, de stocker et de distribuer les renseignements fondamentaux nécessaires à l'identification et à la sélection de géniteurs supérieurs, de même que d'offrir de l'information visant l'amélioration de la gestion des troupeaux inscrites. 179 300 \$ — 36 mois.
- 88-0303 DISC (Asie et pays du Pacifique) — Phase III**
International Centre for Diarrhoeal Disease Research, Bangladesh. Mener à bien les activités de consolidation entreprises à la phase précédente par le DISC (Service d'information et centre de documentation sur les maladies diarrhéiques) et d'en assurer ainsi la viabilité à long terme. 132 150 \$ — 24 mois.
- 88-0304 Service d'information sur le développement industriel (Somalie)***
Ministry of Industry and Commerce, Mogadishu. Renforcer son Industrial Information Service, le rendant ainsi en mesure d'offrir un service d'information technique à l'intention des entreprises manufacturières et de développer ses capacités en matière de publication. 205 200 \$ — 24 mois.
- 88-0307 Cartographie de la trypanosomiase (Kenya)**
Kenya Trypanosomiasis Research Institute, Kisumu. Mettre à jour et consolider les connaissances actuelles sur la répartition de la mouche tsé-tsé et d'autres mouches et des maladies qu'elles transmettent à l'homme et au bétail, et réunir des informations qui pourraient être utilisées pour la remise en valeur et l'utilisation rationnelles des terres infestées par la tsé-tsé. 125 400 \$ — 30 mois.
- 88-0269 Analyse de l'évolution de l'État de Bihar (Inde)**
University of Delhi. Permettre au Kironi Mal College de démontrer la pertinence de techniques de cartographie par ordinateur aux fins de l'analyse de données recueillies spatialement, et de mettre sur pied un système complet d'information géographique pour l'État de Bihar, pour répondre aux besoins en matière de
- 88-0257 Services d'information sur la gestion des sols (Global)**
Conseil international de gestion et de recherche sur les sols, Thaïlande. Diffuser de l'information sur la gestion des sols auprès des systèmes nationaux de recherche en agriculture, en vue de contribuer à accroître la production alimentaire et agricole. 351 900 \$ — 36 mois.
- 88-0248 Système d'information à l'intention des tribunaux pour enfants (Colombie)**
Instituto SER de Investigación, Bogotá. Améliorer le traitement, le stockage, l'analyse, la transmission et l'échange des informations vitales nécessaires pour rendre justice efficacement et rapidement dans les tribunaux pour enfants de la Colombie. 94 100 \$ — 18 mois.
- 88-0242 Service d'information sur la technologie rurale (Inde)***
Institute of Engineering and Rural Technology, Allahabad. Permettre au Centre for Development of Rural Technology de renforcer ses capacités en matière d'information, en vue d'améliorer et d'élargir ses services aux usagers de l'Inde. 85 545 \$ — 36 mois.
- 88-0241 Réseau régional d'information sur les technologies alimentaires (Afrique) — Phase II**
Centre régional africain de technologie, Sénégal. Établir les mécanismes d'échange et de diffusion de l'information relative aux technologies alimentaires en Afrique et introduire des moyens efficaces d'acheminement de cette information aux utilisateurs. 285 700 \$ — 36 mois.
- 88-0238 Centre d'information pilote sur les poissons (Uruguay)**
Universidad de la República, Montevideo. Permettre au Centro de Información y Asesoramiento Toxicológico d'améliorer ses capacités d'information afin de participer pleinement au projet d'établissement d'un module d'information sur les poissons à l'intention des pays en développement, sous la coordination du Programme international sur l'innocuité des substances chimiques, centre pilote pour la région hispanophone de l'Amérique latine et des Antilles. 152 400 \$ — 24 mois.
- 88-0238 Centre d'information pilote industrielle et technologique. 180 980 \$ — 36 mois.**

- 88-1054 Aquifère de Managua** (Nicaragua-Mexico-Canada)*
Institut Nicaragüense de Estudios Territoriales, Managua, Universidad Nacional Autónoma de México et Watfloo, Ontario.
Participer à la recherche d'une solution au problème de l'approvisionnement en eau de la ville de Managua. 151 300 \$ — 24 mois.
- 88-1056 Gestion des eaux souterraines : La Plata (Argentine-Bresil-Canada)***
Universidad de la Plata et Universidad de Buenos Aires, Argentine, Universidad de Watfloo, Ontario, Determiner si les ressources souterraines de la région de La Plata conviennent (tant en quantité qu'en qualité) à des fins d'approvisionnement en eau. 203 400 \$ — 36 mois.
- 88-1058 Production de fonte à partir d'éponge de fer (Égypte-Canada)***
Central Metallurgical Research and Development Institute, Helwan, et le Conseil pour la recherche et la production, Nouveau-Brunswick.
Promouvoir l'utilisation de l'éponge de fer produite localement pour remplacer l'hématite importée et la fonte brute de grande pureté dans les fondentes égyptiennes de petite et moyenne taille. 239 500 \$ — 36 mois.
- 88-1059 Eau souterraine dans la vallée de Cochabamba (Bolivie-Bresil-Mexique-Canada)***
Corporación de Desarrollo de Cochabamba (CORDECO), Bolivie, Universidad de São Paulo, Bresil, Universidad Nacional Autónoma de México et Université de Watfloo, Ontario. Mieux comprendre le réseau d'eau souterraine de la vallée de Cochabamba; de mettre au point un modèle amélioré du nappage pour soustraire et de la qualité de l'eau pour en maximiser l'utilisation; et de renforcer les capacités de recherche en matière d'eau souterraine de CORDECO. 207 590 \$ — 24 mois.
- 88-0011 Réseau national d'information agricole (Congo)**
Ministère du Développement rural, Brazzaville. Renforcer les infrastructures de son Centre de documentation afin de lui permettre de jouer pleinement son rôle de service central d'information agricole auprès du ministère et des organismes qui en relèvent. 103 279 \$ — 36 mois.
- 88-0014 Création d'une école régionale d'études en information pour l'Afrique***
Université d'Addis-Ababa, Éthiopie. Établir à l'Université d'Addis-Ababa une école d'études en information pour l'Afrique (EBIA) qui offrira un programme régional d'études supérieures
- 88-0032 Centre d'information des consommateurs (Inde)**
Consumer Education and Research Centre, Ahmedabad. Créer un centre d'information qui se consacrera principalement aux recours juridiques permettant aux consommateurs lésés d'obtenir réparation. 168 700 \$ — 36 mois.
- 88-0034 Conception d'une base de données sur les coopératives (Tanzanie)**
Co-operative College, Moshie. Préparer un modèle détaillé de base de données pilote sur les coopératives agricoles et assurer la formation des ressources humaines nécessaires à son implantation. 95 000 \$ — 24 mois.
- 88-0035 Système d'information industrielle : phase préliminaire (Kenya)**
Kenya Industrial Research and Development Institute, Nairobi. Étudier le secteur industriel du pays en vue d'en améliorer le rendement en accordant une plus grande importance à l'information, développement et à l'information. 76 730 \$ — 12 mois.
- 88-0039 Services d'information sur le thé (Chine)**
Chinese Academy of Agricultural Sciences, Beijing. Permettre au Tea Research Institute d'appuyer le programme «Spark» du gouvernement chinois en diffusant technologie et information aux producteurs et entrepreneurs chinois et en partageant avec d'autres pays en développement l'expérience et les réalisations de la Chine en la matière. 233 600 \$ — 36 mois.
- 88-0047 Développement de la bibliothèque du CRO (Côte d'Ivoire)**
Centre de recherches océanographiques (CRO), Abidjan. Renforcer les capacités de sa bibliothèque grâce à une organisation plus systématique de ses activités de cueillette, de traitement et de diffusion de ses documents. 100 095 \$ — 36 mois.
- 88-0050 Projet d'indexation de la législation des Petites Antilles**
University of the West Indies, La Barbade. Permettre à la bibliothèque de la faculté de droit de produire une base de données automatisée et accessible par ordinateur. 33 500 \$ — 12 mois.

Sciences de l'information

- 88-0009 TECHNONET — Traduction du guide en bengali (Asie)**
TECHNONET Asia, Singapour. Permettre au TECHNONET et à la Bangladesh Small and Cottage Industries Corporation de produire une version en bengali du manuel de vulgarisation industrielle de TECHNONET pour les petites industries du Bangladesh. 25 248 \$ — 12 mois.
- 88-0010 Musée et centre de référence du TROPMED — maladies transmises par les moustiques (Asie du Sud-Est) — Phase II**
Southeast Asian Ministers of Education Organization's Tropical Medicine and Public Health Project (TROPMED), Thaïlande. Exercer un plus grand impact sur les usagers de la région en mettant sur pied des activités de promotion du programme existant. 155 500 \$ — 24 mois.
- 88-0011 Réseau national d'information agricole (Congo)**
Ministère du Développement rural, Brazzaville. Renforcer les infrastructures de son Centre de documentation afin de lui permettre de jouer pleinement son rôle de service central d'information agricole auprès du ministère et des organismes qui en relèvent. 103 279 \$ — 36 mois.
- 88-0014 Création d'une école régionale d'études en information pour l'Afrique***
Université d'Addis-Ababa, Éthiopie. Établir à l'Université d'Addis-Ababa une école d'études en information pour l'Afrique (EBIA) qui offrira un programme régional d'études supérieures
- 88-1061 Microzomage sismique (Chine-Canada)**
Comprehensive Institute of Geotechnical Investigation and Surveys, Beijing, et Conseil national de recherches du Canada, Ontario. Rassembler les données techniques disponibles en vue de rédiger une série de lignes directrices pour le choix de sites de construction dans les zones prédisposées aux tremblements de terre. 219 250 \$ — 30 mois.
- 88-1062 Traitement du tara (Pérou-Canada)***
Instituto de Investigación Tecnológica Industrial y de Normas Técnicas, Lima, et

- Elaborer des méthodes scientifiques de prospection des gisements de gemme à l'intention des mineurs faisant de l'exploitation à petite échelle.
247 184 \$ — 24 mois.

88-1017 Hydrogéologie (Mali—Canada)
École nationale d'ingénieurs, Bamako, et Institut national de la recherche scientifique, Québec. Permettre au Département d'étude et de recherche de géologie et à l'Institut d'analyser les effets de la pollution humaine et animale sur la nappe aquifère qui alimente Bamako en eau potable, afin de proposer des solutions simples et peu coûteuses. 240 000 \$ — 24 mois.

88-1018 Pierres et granulats (Rwanda—Canada)
Université nationale du Rwanda, Kigali, et Université de Sherbrooke, Québec. Étudier les matériaux de construction de la ville de Kigali, en vue d'établir des normes de construction et de développer des méthodes de recherche, de développement et de transfert de technologie à la petite et moyenne entreprise. 453 100 \$ — 36 mois.

88-1019 Bassin versant de la Marabou (Côte d'Ivoire—Canada)*
Université nationale de Côte d'Ivoire, Abidjan, et Université de Sherbrooke, Québec. Évaluer des ressources en eau d'un bassin versant sahélien typique, en vue d'une meilleure exploitation de la ressource. L'évaluation se fondera sur des données hydrologiques et géophysiques recueillies sur le terrain ainsi que sur des données dérivées des images satellitaires, qui seront analysées à l'aide d'un système d'information à référence spatiale. 357 518 \$ — 36 mois.

88-1037 Amélioration de l'habitat dans les quartiers pauvres à Conakry (Guinée—Canada)
Université de Conakry et Université technique de la Nouvelle-Écosse, Halifax. Améliorer la qualité de l'habitat dans les quartiers pauvres de Conakry et faciliter l'accès à l'habitat dans de nouveaux quartiers résidentiels. 352 300 \$ — 36 mois.

88-1040 Moulage de précision (Chili—Argentine—Canada)*
Universidad de Santiago de Chile, Laboratorio de Entrenamiento Multidisciplinario para la Investigación Tecnológica, La Plata, et Université de Toronto, Ontario. Mettre au point des techniques industrielles appropriées permettant d'appliquer les méthodes de moulage de précision au Chili et en Argentine, en faisant une utilisation maximale des matières premières disponibles localement. 243 700 \$ — 36 mois.

88-1041 Évaluation de la résistance au feu des matériaux de construction (Chine—Canada)*
Ministry of Public Security, Beijing, et Conseil national des recherches du Canada, Ontario. Réduire les dangers de perte de vies humaines et de dommages matériels dus aux incendies, en mettant au point des techniques d'évaluation de la résistance au feu des matériaux de construction résidentielle. 344 700 \$ — 36 mois.

88-1045 Production de briques en schiste argileux (Égypte—Canada)*
General Organization for Housing, Building and Planning Research, Le Caire, et Conseil national de recherches du Canada, Ontario. Mettre au point une technique de production à petite échelle de briques cuites de qualité acceptable en utilisant le schiste comme matière première. 387 700 \$ — 36 mois.

88-1047 Réseau latino-américain de technologie chimique (Amérique latine—Canada)
Compañía de Desarrollo Tecnológico, Brésil, et Université de la Colombie-Britannique, Vancouver. Mettre en place en Amérique latine un réseau de technologie chimique qui puisse coordonner la formation, le soutien technique, les subventions de petits projets de recherche et de développement ainsi que la mise à l'essai en usine de projets pilotes, en vue d'accélérer le processus de recherche, développement et transfert de technologie à la petite et moyenne entreprise. 453 100 \$ — 36 mois.

88-1022 Contrôle du séchage du thé par ordinateur (Sri Lanka—Canada)*
Computer and Information Technology Council of Sri Lanka, Colombo, Université nationale de Singapour et Elcad Systems Incorporated, Ontario. Élaborer un système de contrôle par microprocesseurs, à partir du logiciel mis au point au cours d'un projet précédent subventionné par le Centre pour les opérations de séchage du thé dans de petites installations de traitement.

88-1027 Habitations en pouzzolane (Ouganda—Canada)
Department of Geological Survey and Mines, Entebbe, Nairobi, et Université de Toronto, Ontario. Élaborer des méthodes scientifiques de prospection des gisements de gemme à l'intention des mineurs faisant de l'exploitation à petite échelle. 405 776 \$ — 36 mois.

88-1029 Réseau latino-américain sur l'hydrogéologie urbaine (Amérique latine—Canada)*
Association des géoscientifiques pour le développement international, Bolivie, Universidad de São Paulo, Brésil, Mexico et Université de Waterloo, Ontario. Définir adéquatement les problèmes caractérisant les eaux souterraines en milieu urbain, coordonner des projets de recherche pertinents, échanger des chercheurs et établir des liens entre les chercheurs et les institutions. 327 800 \$ — 36 mois.

88-1031 Phosphate igné (Éthiopie—Canada)
Ethiopian Institute of Geological Surveys et Ethiopian Institute of Agricultural Research, Addis-Ababa, et Université de Québec, Ontario. Établir la base scientifique nécessaire à l'amélioration de la productivité des sols, en faisant appel aux ressources locales (roches et minéraux). 86 500 \$ — 36 mois.

88-1032 Pailis rocheux (Éthiopie—Canada)
Ethiopian Institute of Geological Surveys et Ethiopian Institute of Agricultural Research, Addis-Ababa, et Université de Québec, Ontario. Établir la base scientifique nécessaire à l'amélioration de la productivité des sols, en faisant appel aux ressources locales (roches et minéraux). 165 000 \$ — 36 mois.

88-1033 Contamination de l'eau souterraine à São Paulo (Brésil—Canada) — Phase II
Universidade de São Paulo et Université de Waterloo, Ontario. Analyser la nature et l'origine des contaminants, de la contamination des eaux souterraines, particulièrement en ce qui concerne la présence de métaux lourds et de composés organiques, et tenter de trouver des moyens de définir, de caractériser et d'évaluer la situation des zones contaminées. 225 070 \$ — 24 mois.

88-1034 Colorants antioxydants (Burkina Faso—Canada)
Université de Ouagadougou et Université Simon Fraser, Colombie-Britannique. Valoriser des colorants antioxydants du sorgho teinturier. 63 000 \$ — 12 mois.

88-1035 Bassin versant de la Marabou (Côte d'Ivoire—Canada)*
Université nationale de Côte d'Ivoire, Abidjan, et Université de Sherbrooke, Québec. Évaluer des ressources en eau d'un bassin versant sahélien typique, en vue d'une meilleure exploitation de la ressource. L'évaluation se fondera sur des données hydrologiques et géophysiques recueillies sur le terrain ainsi que sur des données dérivées des images satellitaires, qui seront analysées à l'aide d'un système d'information à référence spatiale. 357 518 \$ — 36 mois.

- 88-0327 Pollution de l'air des maisons (Chine)***
Shanghai Medical University. Permettre au Department of Environmental Health de réduire l'incidence des maladies respiratoires chez les habitants de Shanghai en utilisant des poêles à charbon munis d'appareils de ventilation, améliorer ainsi la qualité de l'air des maisons. 134 480 \$ — 36 mois.
- 88-0329 Byssinose (Chine)***
Guangzhou Occupational Disease Prevention and Treatment Centre, Huang Po Dong, en collaboration avec le Department of Hygiene, Medical College de Guangzhou Jinan University. Déterminer la prévalence de la byssinose à Guangzhou et ainsi établir une base scientifique permettant de définir de meilleurs critères de diagnostic et de mettre au point des mesures appropriées de contrôle et de prévention (y compris de meilleures normes en matière de poussière), dans le cadre d'activités régulières de surveillance. 114 510 \$ — 24 mois.
- 88-0330 Formation en nutrition (Philippines)**
University of the Philippines, Manille. Permettre au Department of Nutrition, College of Public Health, de mettre à l'essai sur le terrain un module de formation communautaire en matière de nutrition dans le contexte des soins de santé primaires. 101 000 \$ — 24 mois.
- 88-0340 Systèmes communautaires de traitement de l'eau (Colombie)***
Universidad del Valle, Cali. Évaluer l'efficacité de systèmes d'approvisionnement en eau à faible coût gérés par les collectivités en Colombie, et de continuer à leur amélioration. 90 760 \$ — 15 mois.
- 88-0342 Nutrition maternelle chez les agricultrices de subsistance (Malawi)***
University of Malawi, Zomba. Permettre au Department of Home Economics de déterminer les secteurs prioritaires en matière de santé et d'état nutritionnel des femmes rurales, en vue de formuler des politiques et des programmes pertinents. 245 675 \$ — 24 mois.
- 88-0344 Message visant à améliorer l'hygiène rurale (Népal)***
Ministère de la Santé, Karamandou. Améliorer l'état de santé de la population rurale du secteur de l'étude. 25 520 \$ — 24 mois.
- 88-0351 Hygiène du travail (Tanzanie)***
University of Dar es Salaam. Permettre à l'Institute of Development Studies d'étudier un système témoin de services d'hygiène du travail en Tanzanie. 13 780 \$ — 18 mois.
- 88-0375 Sac-Sac (Philippines)***
Silliman University, Dumaguete City. La ville de Cebu, et de faire une analyse du caractère adéquat et de l'efficacité des services de SSP offerts à ces segments de la population. 104 570 \$ — 24 mois.
- 88-0373 Soins de santé primaires dans la ville de Cebu (Philippines)***
University of San Jose-Recoletos, Cebu City. Permettre au Research Planning and Scholarship Centre de définir les principaux problèmes de santé des pauvres en milieu urbain dans sept barangays de la ville de Cebu, et de faire une analyse du caractère adéquat et de l'efficacité des services de SSP offerts à ces segments de la population. 104 570 \$ — 24 mois.
- 88-0391 Évaluation de la lutte contre la maladie de Chagas (Brésil)***
Universidade de Brasília. Permettre au Nucleo de Medicina Tropical e Nutricao d'étudier une approche intégrée à la lutte contre la maladie de Chagas, en faisant appel à la participation communautaire au moyen de l'éducation sanitaire, de l'utilisation d'insecticides et de l'amélioration des logements dans les
- 88-0387 Écologie de la leishmaniose (Colombie)***
Universidad de Antioquia, Medellín. Permettre au Centro de Investigaciones Médicas de déterminer la prévalence de la leishmaniose léguminaire américaine dans le foyer de Montebello, d'identifier l'espèce de *Leishmania* et la relation des caractéristiques bioclimatiques de la faune et de la flore, pour établir les bases biologiques et connaître les modalités de transmission et formuler des recommandations de vigilance et de contrôle. 92 775 \$ — 24 mois.
- 88-0385 Maladies diarrhéiques infantiles (Chine)***
Tianjin Medical Institute. Permettre à la School of Public Health d'étudier l'épidémiologie des maladies diarrhéiques chez les enfants du comté de Tianjin Ji, l'objectif étant de mettre au point un programme d'éducation sanitaire axé sur la prévention et le contrôle de ces maladies. 79 880 \$ — 24 mois.
- 88-0381 Immunisation anti-rougeoleuse (Philippines)***
University of the Philippines, Manille. Permettre à son collège de médecine, en collaboration avec les services d'hygiène maternelle et infantile du ministère de la Santé et l'Institut de recherche pour la médecine tropicale, de déterminer l'efficacité du vaccin antirougeoleux Edmonston-Zagreb administré aux bébés de 6 mois, par rapport à la pratique courante qui consiste à administrer le vaccin Schwarz aux enfants de 9 mois. 130 620 \$ — 24 mois.
- 88-0385 Maladies diarrhéiques infantiles (Chine)***
Tianjin Medical Institute. Permettre à la School of Public Health d'étudier l'épidémiologie des maladies diarrhéiques chez les enfants du comté de Tianjin Ji, l'objectif étant de mettre au point un programme d'éducation sanitaire axé sur la prévention et le contrôle de ces maladies. 79 880 \$ — 24 mois.
- 88-0391 Évaluation de la lutte contre la maladie de Chagas (Brésil)***
Universidade de Brasília. Permettre au Nucleo de Medicina Tropical e Nutricao d'étudier une approche intégrée à la lutte contre la maladie de Chagas, en faisant appel à la participation communautaire au moyen de l'éducation sanitaire, de l'utilisation d'insecticides et de l'amélioration des logements dans les
- 88-0353 Soins mentaux dans l'Utter Pradesh (Inde)***
Sanjay Gandhi Post-Graduate Institute of Medical Sciences, Lucknow. Étudier les modèles et l'utilité des soins de santé mentale offerts en Inde, de déterminer des modèles de échange selon les perceptions des collectivités et de définir les attentes de ces derniers. 42 570 \$ — 12 mois.
- 88-0359 Prévention des diarrhées persistantes (Chili)***
Instituto de Nutrición y Tecnología de los Alimentos, Santiago. Mettre en place des programmes structurés qui contribueront à réduire l'incidence de la diarrhée persistante chez les enfants de moins de deux ans. 66 280 \$ — 24 mois.
- 88-0363 Épidémiologie environnementale (Amérique latine)**
Secretaría Ejecutiva Permanente del Convento Andres Bello, Colombie. Renforcer la capacité de recherche d'un noyau de chercheurs de la sous-région des Andes, en vue d'améliorer la capacité des institutions nationales de lutter adéquatement contre les problèmes d'épidémiologie environnementale, tout en améliorant la qualité des propositions de recherche présentées au CRDI dans ce domaine. 177 634 \$ — 36 mois.
- 88-0369 Participation communautaire à la prestation des services de santé (Philippines)***
St. Louis University, Baguio City. Permettre à son College of Nursing de mettre au point des stratégies visant à promouvoir la participation communautaire à la planification et à la prestation de services de santé, et d'évaluer l'efficacité de ces stratégies. 90 930 \$ — 24 mois.
- 88-0372 Recherche sur les soins de santé primaires (Philippines)***
Institute of Philippine Culture, Quezon City. Analyser les processus d'élaboration des soins de santé primaires et leur contexte, et de continuer ainsi à la mise au point d'une méthode rapide d'établissement du profil d'une collectivité, méthode qui pourrait servir à la mise en marche et à la planification d'un projet viable de SSP. 80 380 \$ — 24 mois.
- 88-0373 Soins de santé primaires dans la ville de Cebu (Philippines)***
University of San Jose-Recoletos, Cebu City. Permettre au Research Planning and Scholarship Centre de définir les principaux problèmes de santé des pauvres en milieu urbain dans sept barangays de la ville de Cebu, et de faire une analyse du caractère adéquat et de l'efficacité des services de SSP offerts à ces segments de la population. 104 570 \$ — 24 mois.
- 88-0375 Sac-Sac (Philippines)***
Silliman University, Dumaguete City. La ville de Cebu, et de faire une analyse du caractère adéquat et de l'efficacité des services de SSP offerts à ces segments de la population. 104 570 \$ — 24 mois.
- 88-0391 Évaluation de la lutte contre la maladie de Chagas (Brésil)***
Universidade de Brasília. Permettre au Nucleo de Medicina Tropical e Nutricao d'étudier une approche intégrée à la lutte contre la maladie de Chagas, en faisant appel à la participation communautaire au moyen de l'éducation sanitaire, de l'utilisation d'insecticides et de l'amélioration des logements dans les

santé de la présence d'arsenic dans l'eau potable et les aliments dans une petite collectivité d'une région des hautes terres du nord-est du Chili et déterminer l'efficacité et la faisabilité d'un système simple d'extraction de l'arsenic.

297 000 \$ — 24 mois.

la recherche sur la reproduction humaine
partainé par l'OMS. 450 000 \$ — 24 mois.

(MALAISIE)*
Université Malaya, Kuala Lumpur. Membre
au point un béliet hydraulique « approprié »
à utiliser dans le cadre de projets

L'appareil sera fabriqué de matériaux disponibles sur place et pourra facilement être assemblé, utilisé et entrete nu par les villageois. 72 400 — 24 mois.

88-0274 Enseignement de la
réhydratation orale (Mexique)
Grupo Consultor CICLOPE SC, Mexico.

Accroître l'utilisation de la thérapie de réhydratation orale dans les régions rurales du Mexique. 167 560 \$ — 18 mois.

88-0275 Eaux résiduaires agricoles
(Thailande)*
Asian Institute of Technology, Bangkok.

Mettre au point, pour le traitement et le recyclage des eaux usées d'origine agro-industrielle, une technologie efficace

qui soit à la fois économique et applicable en Thaïlande ou dans d'autres régions tropicales. 132 630 \$ — 30 mois.

88-0276 Attitudes à l'égard de l'avortement (Cuba)
Ministerio de Salud Pública, La Havane.

Permettre à l'Institut National de
Endocrinologia de déterminer les facteurs
psycho-sociaux qui expliquent le taux

La Havane, 14 030 \$ — 12 mois.

(Nicaragua)* Ministère de la santé, Managua. Cerner les connaissances, attitudes et pratiques des

femmes d'entre 20 et 60 ans en ce qui
 concerne les cytolgies vaginales et le
 cancer de l'utérus et du col de l'utérus à

L'incidence de la dysplasie aigüe et du cancer de l'utérus et du col de l'utérus dans la population étudiée, 44 659 \$ —

18 mois.

Indian Institute of Management, Gujarat.
Permettre au Public Systems Group de
mieux harmoniser les activités du

programme public de bien-être familial
aux besoins des collectivités en la matière.
50 200 \$ — 24 mois.

88-0298 Tuberculeux interrompant leur traitement (Nicaragua)*
(Centro de Investigación y Estudios de la

Salud, Managua. Déterminer les principaux facteurs qui influencent les attitudes des tuberculeux face au

traitement et leur tendance à l'irrégularité et à l'abandon. 54 010 \$ — 12 mois.

89 600 \$ — 36 mois.

88-0270 Recherche sur la reproduction humaine (Global) — Phase II

Organisation mondiale de la santé (OMS), Suisse. Financer le programme spécial de recherche, développement et formation à

santé de la présence d'arsenic dans l'eau potable et les aliments dans une petite collectivité d'une région des hautes terres du nord-est du Chili et déterminer l'efficacité et la faisabilité d'un système simple d'extraction de l'arsenic.

297 000 \$ — 24 mois.

88-0251 La société sénégalaise et le SIDA (Sénégal)*
Ministère du Plan et de la Coopération,
Dakar. Permettre au Bureau de recherches
médicales et pharmaceutiques d'étudier la
perception et la compréhension du SIDA

tant dans la population générale que dans une population à risque (prostituées), afin d'aboutir à l'acceptabilité des mesures

prévenues par le contrôle du SIDA.
73 740 \$ — 12 mois.

personnes âgées (Jamaïque)
University of the West Indies, Kingston.
Permettre au Département of Social and

Preventive Medicine a évaluer la santé et l'état nutritionnel des personnes âgées et leurs rapports avec diverses caractéristiques démographiques et

88-0255 Surveillance du paludisme

(Brésil)
Universidade Federal do Rio de Janeiro.
Permettre au Centro de Tecnologia de
faire appel à un système d'information par

l'évaluation du paludisme dans les
image sur micro-ordinateur pour
l'application d'un système d'information par
collectivités et de fournir du soutien

lorsqu'il s'agit de décider des mesures de prévention et de contrôle à prendre. 86 060 \$ — 24 mois.

88-0256 Encéphalite japonaise
(Thaïlande)
Ministry of Public Health, Bangkok.

Permettre au National Institute of Health,
Department of Medical Sciences,
Nonthaburi, de déterminer l'état

immunitaire au virus de l'encéphalite japonaise des enfants vivant dans le nord de la Thaïlande. 58 150 \$ — 15 mois.

88-0266 Participation communautaire à l'hygiène dentaire (Philippines)*
University of the Philippines, Manille.

Permettre au College of Public Health
d'améliorer la santé dentaire et les
connaissances, attitudes et pratiques en la

manière des pauvres en milieu urbain, particulièrement chez les enfants de 2 à 14 ans, en mettant au point et en testant un programme de prévention administré par

la collectivité dans trois secteurs de la région métropolitaine de Manille. 89 600 \$ — 36 mois.

88-0270 Recherche sur la reproduction humaine (Global) — Phase II

Organisation mondiale de la santé (OMS), Suisse. Financer le programme spécial de recherche, développement et formation à

- Permettre au Obatem Awolowo University Teaching Hospital de déterminer chaque année, sur une période de cinq ans, les courbes numériques de séroprevalence des infections VIH au sein de la population urbaine et rurale du Nigéria. 964 790 \$ — 60 mois.
- 88-0177 Brugia malayi** (Indonésie) — Phase II Ministry of Health, Djakarta. Permettre au National Institute for Health Research and Development de déterminer les facteurs socio-comportementaux rattachés à la transmission de la filariose dans les populations transmissibles qui pourraient faire l'objet d'interventions visant à réduire la filariose dans les collectivités après leur rétablissement. 91 670 \$ — 30 mois.
- 88-0180 Atelier sur les SSP** (Costa Rica) Centro Internacional de Investigación y Asesoría en Salud, San José. Permettre à l'Asociación Internacional de Investigación y Asesoría en Salud d'analyser les expériences nationales et infra-régionales en matière de réaction, d'application et d'évaluation de programmes de soins de santé primaires (SSP), afin d'en accroître l'efficacité. 82 420 \$ — 12 mois.
- 88-0181 Évaluation des projets d'approvisionnement en eau des régions rurales** (Sierra Leone) University of Sierra Leone, Freetown. Permettre au Njala University College d'évaluer l'efficacité des programmes financés par l'aide extérieure ayant pour but de fournir des systèmes d'approvisionnement en eau aux villages. 149 260 \$ — 30 mois.
- 88-0190 Système intégré de diagnostic et de planification de la santé au niveau des districts** (Kenya) African Medical and Research Foundation, Nairobi. Faciliter la décentralisation d'un processus de planification des programmes et d'affectation des ressources en mettant au point un système d'information de santé amélioré peu coûteux, pour les districts de l'Afrique orientale. 360 105 \$ — 36 mois.
- 88-0205 Aide institutionnelle-Pahou** (Afrique*) Université du Bénin, Cotonou. Permettre à la Faculté de sciences de la santé de devenir la plaque tournante de la recherche et de la formation en matière de soins de santé primaires, d'appuyer des travaux de recherche visant à améliorer les activités de santé et de développement dans le district Ouidah, et de concevoir des programmes africains de recherche appliquée dans le domaine de la santé. 1 522 140 \$ — 24 mois.
- 88-0221 Dracunculose** (Mali) Institut national de recherche en santé publique, Bamako. Étudier l'épidémiologie de la dracunculose chez une population nomade. 13 270 \$ — 12 mois.
- 88-0216 Lutte collective contre le paludisme** (Colombie) Corporación para Investigaciones Biológicas, Medellín. Comparer, dans une région sous-développée, trois stratégies de lutte contre le paludisme et mesurer leur coût et leur efficacité par rapport à ceux de la méthode traditionnelle actuellement appliquée par les organismes gouvernementaux. 248 878 \$ — 30 mois.
- 88-0246 Infections de la corne** (Népal) — Phase II* Tribhuvan University, Katmandou. Réduire la fréquence des cas de troubles visuels et de cécité causés par des infections de la corne, grâce à l'application rapide de traitements aux amibiotes et à l'éducation communautaire dans les collectivités rurales, à l'appui de l'objectif de «la santé pour tous en l'an 2000». 270 340 \$ — 48 mois.
- 88-0247 Contamination par l'arsenic** (Chili) Universidad de Chile, Santiago. Évaluer le degré de contamination et les effets sur la santé humaine.
- 88-0227 Effet d'un apport complémentaire de vitamine A sur la morbidité et la mortalité infantiles en Éthiopie*** Université d'Addis-Ababa. Améliorer les mesures de lutte contre la morbidité et la mortalité chez les enfants éthiopiens. Le projet permettra en outre d'accroître les compétences institutionnelles de l'Éthiopie, et de lui en donner de nouvelles, dans les domaines de l'épidémiologie, de la planification, de l'application et de l'évaluation des programmes, de la biostatistique et du traitement des données. 961 515 \$ — 36 mois.
- 88-0230 Lutte communautaire contre les infections aiguës des voies respiratoires supérieures** (Cuba*) Instituto de Medicina Tropical «Pedro Kouri», La Havane. Recueillir des informations plus complètes et plus exactes sur la morbidité et la mortalité attribuables aux infections respiratoires aiguës, et mettre en oeuvre et évaluer un train de mesures en matière de soins de santé. 152 010 \$ — 36 mois.
- 88-0233 Déterminants de la malnutrition protéino-calorique** (Malawi*) University of Malawi, Zomba. Permettre au Chancellor College de déterminer la prévalence de la malnutrition chez les enfants de 0 à 36 mois. 59 293 \$ — 16 mois.
- 88-0243 Stratégies de participation à l'approvisionnement en eau** (Costa Rica) Fundación Tecnológica de Costa Rica, Cartago. Adapter les stratégies de participation communautaire mises au point dans le cadre du projet précédent *Technologie de la pompe à main* (Costa Rica) et y faire participer des membres de la collectivité en tant qu'instructeurs pour les aspects sociaux et techniques de l'introduction et de l'application des technologies de l'approvisionnement en eau, et étudier l'application de la technologie du ferro-cement à la remise en état des puits peu profonds. 118 760 \$ — 12 mois.
- 88-0246 Infections de la corne** (Népal) — Phase II* Tribhuvan University, Katmandou. Réduire la fréquence des cas de troubles visuels et de cécité causés par des infections de la corne, grâce à l'application rapide de traitements aux amibiotes et à l'éducation communautaire dans les collectivités rurales, à l'appui de l'objectif de «la santé pour tous en l'an 2000». 270 340 \$ — 48 mois.
- 88-0247 Contamination par l'arsenic** (Chili) Universidad de Chile, Santiago. Évaluer le degré de contamination et les effets sur la
- 88-0211 Plans d'administration d'un supplément de fer** (Thaïlande) Mahidol University, Nakorn Pathom. Permettre à l'Institut de Nutrition d'étudier différentes formules qui pourraient garantir que les femmes reçoivent des suppléments de fer pendant la grossesse. 73 190 \$ — 30 mois.
- 88-0212 Lutte écologique contre le paludisme** (Népal*) Nepal Malaria Eradication Organization, Katmandou. Trouver des méthodes bio-environnementales concrètes de lutte contre le paludisme qui seront parfaitement adaptées aux conditions locales et qui seront mises en oeuvre avec la participation communautaire. 107 231 \$ — 30 mois.
- 88-0213 Lutte biologique contre le paludisme** (Pérou) Universidad Peruana Cayetano Heredia, Lima. Permettre à l'Institut de médecine tropicale «Alexander von Humboldt» de mettre au point et de tester sur le terrain une technique simple pour la production locale optimale de *Bacillus thuringiensis* var. *israelensis* H-14 (Bti) à partir de l'eau tirée de la noix de coco. 49 425 \$ — 18 mois.
- 88-0214 Diagnostic de la dengue** (Brésil) Fondation Oswaldo Cruz, Rio de Janeiro. Lancer une méthode de diagnostic rapide de la dengue et en étudier l'utilisation dans le cadre d'un réseau de laboratoires nationaux de santé publique au Brésil. 98 030 \$ — 24 mois.
- 88-0215 Diagnostic du SIDA** (Global) — Phase II Programme de technologie appropriée pour la santé, Canada. Mettre au point et perfectionner, pour la détection du VIH-1 (virus de l'immunodéficience humaine), un test de dosage immunologique sur bandelette précis, peu coûteux et ne faisant appel à aucun instrument, pouvant être utilisé à des fins de dépistage du syndrome de l'immunodéficience acquise (SIDA) et fabriqué dans les pays en développement. 244 450 \$ — 24 mois.
- 88-0216 Lutte collective contre le paludisme** (Colombie) Corporación para Investigaciones Biológicas, Medellín. Comparer, dans une région sous-développée, trois stratégies de lutte contre le paludisme et mesurer leur coût et leur efficacité par rapport à ceux de la méthode traditionnelle actuellement appliquée par les organismes gouvernementaux. 248 878 \$ — 30 mois.
- 88-0221 Dracunculose** (Mali) Institut national de recherche en santé publique, Bamako. Étudier l'épidémiologie de la dracunculose chez une population nomade. 13 270 \$ — 12 mois.

- Toronto, Ontario. Déterminer les caractéristiques des conditions environnementales particulières qui font que les sols du Kenya occidental semi-aride sont vulnérables à l'érosion, afin de définir et de mettre en application des mesures de conservation appropriées, tout en améliorant les compétences dans ce domaine. 379 150 \$ — 36 mois.
- 88-1052 Économie des pêches (Asie—Canada)** Asian Fisheries Science Research Network (AFSSRN), Philippines, et Institut d'analyse des pêches, Université Simon Fraser, Colombie-Britannique. Améliorer les compétences de recherche de l'AFSSRN, ainsi que sa production de travaux de recherche, principalement dans le domaine de la gestion des pêches en milieu naturel. 784 900 \$ — 72 mois.
- 88-1053 Microbiologie du poisson (Philippines—Canada)*** Southeast Asian Fisheries Development Centre, Tigbauan, et Université Simon Fraser, Colombie-Britannique. Aider les aquiculteurs et les pêcheurs artisanaux de l'Asie du Sud-Est en mettant au point des méthodes de lutte contre deux maladies importantes, le syndrome ulcéraire épizootique du poisson et la vibriose à luminescence des postlarves des crevettes roses. 249 240 \$ — 36 mois.
- Sciences de la santé**
- 88-0001 Les femmes, l'eau et l'hygiène (Égypte) — Phase II** American Research Centre d'Évaluer l'effet d'un programme d'enseignement de l'hygiène sur le comportement sanitaire général des villageois et sur les conditions environnementales dans deux villages qui ont été le site des travaux de la Phase I. 155 980 \$ — 20 mois.
- 88-0037 Moyens traditionnels de régulation Obafemi Awolowo, Ile-Ife.** Université Obafemi Awolowo, Ile-Ife. Permettre à la Faculté des sciences de la santé de faire appel à des praticiens de la médecine traditionnelle pour promouvoir une santé de faire appel à des praticiens de la médecine traditionnelle pour promouvoir la pour planifier la lutte contre la schistosomiase dans le Ngamiland. 46 043 \$ — 24 mois.
- 88-0104 Système intégral de recyclage des déchets organiques (Mexique)** Grupo de Tecnología Alternativa, Mexico. Mesurer l'impact d'un système peu coûteux de collecte et de traitement des déchets sur le développement communautaire. 239 500 \$ — 30 mois.
- 88-0125 Évaluation opérationnelle d'un programme national de lutte contre la tuberculose (Philippines)** Philippine Tuberculosis Society, Quezon City. Déterminer les problèmes de fonctionnement qu'éprouve le Control Program en matière de dépistage
- 88-0139 Recherche en nutrition axée sur des problèmes concrets (Afrique)** Organisation mondiale de la santé. Suisse. Promouvoir la recherche appliquée axée sur les problèmes de nutrition de l'Afrique, et accroître les compétences en matière de recherche en Afrique de l'Ouest. 242 880 \$ — 18 mois.
- 88-0142 Recherche appliquée sur la nutrition (Afrique de l'Est) — Phase II** University of Nairobi, Kenya. Permettre au Département de Home Economics de déterminer et d'évaluer les caractéristiques des pratiques actuelles en matière de santé et de nutrition des centres kenyanais à l'intention des enfants d'âge préscolaire, en vue de faire des recommandations visant à améliorer l'exploitation des centres. 39 000 \$ — 18 mois.
- 88-0071 Évaluation de l'amélioration des conditions sanitaires (Brésil)** Universidade Federal de Bahia, Canela. Permettre au Departamento de Higiene and Tropical Medicine, Royanne-Uni, d'étudier les effets de certains facteurs environnementaux, et plus spécialement des installations sanitaires à bon marché sur les maladies diarrhéiques afin d'élaborer une politique de santé publique. 151 190 \$ — 24 mois.
- 88-0072 Qualité de l'eau (Malawi)** University of Malawi, Zomba. Permettre au Centre for Social Research d'étudier la qualité de l'eau et de son utilisation dans les milieux ruraux et de déterminer s'il y a contamination pendant le transport entre la source d'approvisionnement et les foyers des consommateurs. 73 740 \$ — 24 mois.
- 88-0084 Transmission de la schistosomiase (Botswana)** Université du Botswana, Gaborone. Permettre au Département de biologie d'analyser la biologie du mollusque hôte intermédiaire de *Schistosoma mansoni* pour planifier la lutte contre la schistosomiase dans le Ngamiland. 46 043 \$ — 24 mois.
- 88-0104 Système intégral de recyclage des déchets organiques (Mexique)** Grupo de Tecnología Alternativa, Mexico. Mesurer l'impact d'un système peu coûteux de collecte et de traitement des déchets sur le développement communautaire. 239 500 \$ — 30 mois.
- 88-0125 Évaluation opérationnelle d'un programme national de lutte contre la tuberculose (Philippines)** Philippine Tuberculosis Society, Quezon City. Déterminer les problèmes de fonctionnement qu'éprouve le Control Program en matière de dépistage
- 88-0174 Épidémiologie du VIH-1 et du VIH-2 (Nigéria)*** Obafemi Awolowo Université, Ile-Ife.
- 88-0171 Réseau sur les pesticides de l'Afrique orientale** Kenya Medical Research Institute, Nairobi, Tropical Pesticides Research Institute, Tazmanie, et Ministry of Labour, Ouganda. Évaluer les dangers pour la santé posés par l'utilisation des pesticides dans les exploitations agricoles où l'on cultive le café, le coton et d'autres produits importants, afin de mettre au point des stratégies de prévention et de traitement des empoisonnements par les pesticides. 852 740 \$ — 42 mois.
- 88-0168 Facteurs de risque liés à la leishmaniose cutanée (Costa Rica)** Universidad Nacional, Heredia. Permettre à la Escuela de Medicina Veterinaria de definir et de quantifier, au moyen d'une étude de cas témoins, les facteurs de risque liés à la transmission de la leishmaniose cutanée chez les enfants. 280 995 \$ — 36 mois.
- 88-0171 Réseau sur les pesticides de l'Afrique orientale** Kenya Medical Research Institute, Nairobi, Tropical Pesticides Research Institute, Tazmanie, et Ministry of Labour, Ouganda. Évaluer les dangers pour la santé posés par l'utilisation des pesticides dans les exploitations agricoles où l'on cultive le café, le coton et d'autres produits importants, afin de mettre au point des stratégies de prévention et de traitement des empoisonnements par les pesticides. 852 740 \$ — 42 mois.
- 88-0168 Facteurs de risque liés à la leishmaniose cutanée (Costa Rica)** Universidad Nacional, Heredia. Permettre à la Escuela de Medicina Veterinaria de definir et de quantifier, au moyen d'une étude de cas témoins, les facteurs de risque liés à la transmission de la leishmaniose cutanée chez les enfants. 280 995 \$ — 36 mois.
- 88-0165 Effet de la planification familiale sur la fécondité (Kenya)*** Université Kenyatta, Nairobi. Permettre au Département de géographie de mesurer les tendances de la fécondité dans la région de Chogoria, dans l'est du Kenya, et de déterminer l'efficacité relative des divers méthodes contraceptives utilisées. 30 600 \$ — 18 mois.
- 88-0165 Effet de la planification familiale sur la fécondité (Kenya)*** Université Kenyatta, Nairobi. Permettre au Département de géographie de mesurer les tendances de la fécondité dans la région de Chogoria, dans l'est du Kenya, et de déterminer l'efficacité relative des divers méthodes contraceptives utilisées. 30 600 \$ — 18 mois.
- 88-0171 Réseau sur les pesticides de l'Afrique orientale** Kenya Medical Research Institute, Nairobi, Tropical Pesticides Research Institute, Tazmanie, et Ministry of Labour, Ouganda. Évaluer les dangers pour la santé posés par l'utilisation des pesticides dans les exploitations agricoles où l'on cultive le café, le coton et d'autres produits importants, afin de mettre au point des stratégies de prévention et de traitement des empoisonnements par les pesticides. 852 740 \$ — 42 mois.
- 88-0174 Épidémiologie du VIH-1 et du VIH-2 (Nigéria)*** Obafemi Awolowo Université, Ile-Ife.

88-0299 Conseiller économique en foresterie (Asie de l'Est et du Sud-Est) Thaïlande. Développer et renforcer l'économie forestière en tant que discipline part entière en gestion des ressources forestières et en recherche sur l'utilisation des produits forestiers. 76 500 \$ — 24 mois.

88-0300 Réseau de recherche sur les engrais (Afrique de l'Ouest) — Phase III Centre international de développement des engrais, Togo. Mettre au point et évaluer des méthodes plus efficaces d'utilisation des engrais faisant appel à des engrais peu coûteux et adaptés aux divers environnements et systèmes culturels africains. 158 400 \$ — 12 mois.

88-0305 Systèmes post-récoltes pour céréales (Tanzanie)* Uyoie Agricultrul Centre, Mbeve. Améliorer les pratiques post-récoltes des petits producteurs à l'égard des céréales pour consommation domestique et des surplus de céréales dans les zones d'altitude du sud. 199 100 \$ — 36 mois.

88-0306 Technologie post-récolte pour le soja (Thaïlande)* Département of Agriculture, Bangkok. Déterminer et définir les possibilités d'amélioration des pratiques post-récoltes et des techniques de commercialisation dans l'industrie du soja en Thaïlande. 83 000 \$ — 15 mois.

88-0309 Amélioration du bétail des petits élevages (Thaïlande) — Phase II Kasetsart University Foundation, Bangkok. Permettre à la Kasetsart University de mettre au point des méthodes appropriées de gestion combinant la production de maïs miniaiture et son utilisation fourragère, et ainsi d'accroître le revenu tiré du bétail d'élevage en Thaïlande. 61 500 \$ — 36 mois.

88-0312 Semences et plantations (Congo)* Direction générale de la recherche scientifique et technique, Brazzaville. Permettre au Centre d'études sur les ressources végétales de reconstituer des écosystèmes du massif du Mayombe par la réintroduction des espèces autochtones nobles par une régénération artificielle. 78 700 \$ — 36 mois.

88-0314 Agroforesterie (Chana)* University of Science and Technology, Kurnasi. Permettre à l'Institut of Renewable Natural Resources, en collaboration avec le Conseil international pour la recherche en agroforesterie, Kenya, d'améliorer la productivité et la soutenabilité des systèmes actuels

d'utilisation des sols du Ghana en y intégrant des technologies agroforestières appropriées. 123 600 \$ — 12 mois.

88-0326 Systèmes d'élevage du bétail (Tanzanie) — Phase II* Tanzania Livestock Research Organization, Dar es-Salaam. Permettre au Livestock Production Research Institute et à la Malya Research Station de mettre au point et d'introduire des technologies améliorées pour l'élevage du bétail dans le secteur traditionnel, et de renforcer la Tanzania Livestock Research Organization. 239 600 \$ — 36 mois.

88-0334 Génétique des aquacultures (Indonésie) — Phase III* Research Institute for Freshwater Fisheries, Bogor. Mettre au point et appliquer des méthodes de recherche génétique et des stratégies de gestion des stocks de géniteurs en vue d'obtenir des souches génétiquement supérieures de la carpe commune et d'autres espèces à des fins de production aquicole. 187 300 \$ — 36 mois.

88-0341 Tuberculose alimentaires (Congo) — Phase III* Direction générale de la recherche scientifique et technique, Loudima. Permettre au Centre de recherches agronomiques de Loudima de lever les contraintes majeures qui bloquent l'augmentation de la production du manioc chez le petit agriculteur. 155 500 \$ — 36 mois.

88-0380 Systèmes de mariculture (Chili) Pontificia Universidad Católica de Chile, Santiago. Permettre au Departamento de Biología y Tecnología del Mar d'évaluer les paramètres biologiques, technologiques et économiques d'un système de polyculture marine exploitée en location dans une région côtière. 72 360 \$ — 24 mois.

88-1004 Colza-moutarde (Inde-Canada) Indian Council of Agricultural Research, New Delhi, et Agriculture Canada, Saskatchewan. Améliorer la production du colza et de la moutarde en accroissant leur rendement et en les stabilisant, ainsi qu'en rehaussant la qualité des huiles et des semoules. 538 000 \$ — 48 mois.

88-1016 Concombres (La Barbade-Canada) Barbados Agricultural Development Corporation, Christ Church, et Farmwest Management Ltd, Saskatchewan. Créer une capacité de production et de marketing chez les petits marchands de La Barbade afin d'accroître leur revenu net et le bien-être de leur famille. 240 900 \$ — 24 mois.

88-1024 Ecologie du plancton (Chili-Canada) Universidad de Concepción et Université de Dalhousie, Nouvelle-Écosse. Étudier les processus environnementaux (hydrologiques et biologiques) et leurs effets sur la disponibilité du plancton dans les fjords du sud du Chili. 201 000 \$ — 24 mois.

88-1028 Anticorps monoclonaux contre des virus végétaux (IITA-Canada)* Institut international d'agriculture tropicale (IITA), Nigéria et Agriculture Canada, Ouarou. Produire et utiliser des anticorps monoclonaux afin de constituer une base de données sur l'identification et la répartition des virus qui infectent les principales cultures vivrières en Afrique et aider les phylosélectionneurs à obtenir des cultivars résistants. 597 100 \$ — 36 mois.

88-1036 Productivité des lacs (Ouganda-Canada) Ministry of Animal Industries and Fisheries, Kampala, et Institut des eaux douces du ministère des Pêches et Océans, Manitoba. Définir les possibilités à long terme de la production halieutique des lacs Victoria et Kyoga, en étudiant l'évolution de la productivité de ces lacs, compte tenu des conditions écologiques changeantes au cours des vingt dernières années. 109 700 \$ — 36 mois.

88-1039 Réseau de conchyliculture (Gloabal-Canada) Lester B. Pearson Institute for International Development, Nouvelle-Écosse. Permettre à l'Université Dalhousie de s'intégrer à un réseau formel regroupant divers projets actuels et proposés du CRDI dans le domaine de la culture des mollusques, et offrir au réseau les services d'un coordinateur scientifique. 249 300 \$ — 24 mois.

88-1043 Lutte microbologique (Égypte-Canada) — Phase II* National Research Centre, Le Caire, et Agriculture Canada, Manitoba. Élaborer et mettre en application des systèmes écologiquement et économiquement acceptables de lutte contre les insectes nuisibles faisant appel à *Bacillus thuringiensis*. 496 900 \$ — 36 mois.

88-1048 Aliments andins (Pérou-Canada) Centro de Investigación, Educación y Desarrollo, Lima, et Université du Manitoba, Winnipeg. Contribuer à la mise de mise en marché des produits andins collectés chez les agriculteurs du sud du Pérou. 390 400 \$ — 36 mois.

88-1051 Récupération des terres (Kenya-Canada) Moi University, Eldoret, et Université de

- 88-0282 Manioc et patate douce (Rwanda) — Phase III* Ministère de l'Agriculture, Kigali. Permettre à l'Institut des sciences agronomiques du Rwanda de renforcer la capacité de ce pays en matière de recherche sur les plantes racines et ainsi contribuer à l'augmentation de sa production alimentaire. 240 000 \$ — 24 mois.
- 88-0287 Modules de production tropicale (Mexique) Instituto Nacional de Investigaciones Forestales y Agropecuarias, Mexico. Mettre au point des systèmes intégrés agro-sylvo-pastoraux pour accroître la production d'aliments et de récoltes commerciales au profit des petits agriculteurs de la péninsule du Yucatan, au Mexique. 406 800 \$ — 48 mois.
- 88-0292 Amélioration du peuplier (Inde) Y.S. Parmar University of Horticulture and Forestry, Nainital. Mettre au point des variétés supérieures de peuplier à croissance rapide convenant au climat des collines pré-himalayennes de l'Inde, en vue de répondre aux besoins de la population en bois de chauffage, fournissant ainsi que de fourrage.
- 88-0294 Sylviculture (Inde) — Phase II* Indian Grassland and Fodder Research Institute, Jhansi. Accroître la productivité de pâturages détériorés et de terres incultes des régions pastorales semi-arides grâce à la culture intercalaire d'arbustes et d'arbres à croissance rapide et de légumineuses et graminées fourragères offrant un bon potentiel de production de fourrage et de bois de chauffage. 455 390 \$ — 60 mois.
- 88-0296 Cultures améliorées pour les petits paysans (Chili) — Phase II Universidad Austral de Chile, Valdivia. Sélectionner et élaborer des variétés améliorées de pommes de terre, céréales et autres cultures, et mettre au point de meilleures techniques culturales dans la région X du Chili, accroissant ainsi la productivité des petites fermes. 369 000 \$ — 36 mois.
- de mesurer et de protéger les ressources naturelles actuelles. 178 300 \$ — 36 mois.
- 88-0263 Réseau sur les pâturages de l'Afrique orientale et australe — Phase II Centre international pour l'élevage en Afrique (CIEA), Ethiopie. Encourager et appuyer les recherches appropriées sur les pâturages réalisés par les chercheurs des programmes nationaux de recherche agricole, en vue d'améliorer la disponibilité des provenances et de réduire la détérioration de l'environnement, en venant en aide au Réseau sur les pâturages de l'Afrique orientale et australe (PANESA). 462 000 \$ — 24 mois.
- 88-0264 Réseau sur la banane et la banane plantain — Phase V Réseau international pour l'amélioration de la banane et de la banane plantain (INBAP), France. Continuer à appuyer le développement et les activités de l'INBAP. 200 000 \$ — 12 mois.
- 88-0265 Évaluation et adoption d'engrais (Gloabal) Centre international de développement des engrais, Fais-Ums. En faisant participer les agriculteurs à la recherche, mettre au point et évaluer les méthodes appropriées d'utilisation des engrais dans les fermes et repérer les obstacles qui empêchent les petits agriculteurs d'avoir davantage recours aux engrais. 1 074 350 \$ — 36 mois.
- 88-0267 Systèmes de production du bétail (Burundi) — Phase II* Ministère de l'Agriculture et de l'Élevage du Burundi, Bujumbura. Permettre à l'Institut des sciences agricoles du Burundi (ISABU) d'améliorer les systèmes de production du bétail en usage chez les petits agriculteurs des basses terres de la région d'Imbo ainsi que chez ceux des régions des hautes terres, et améliorer les compétences en matière de recherche de l'ISABU. 328 600 \$ — 36 mois.
- 88-0272 Abeilles africaines (Colombie) — Phase II* Universidad Nacional de Colombia, Medellín. Améliorer la production apicole des petits éleveurs du sud-ouest d'Antioquia. 192 700 \$ — 36 mois.
- 88-0281 Caractérisation agro-écologique (Gloabal) Centre international de recherche agricole dans les zones arides (ICARDA), Syrie. Mettre à la disposition des établissements nationaux des modèles types des diverses conditions agro-écologiques et de leur impact sur les systèmes agricoles et établir ces outils au service de la solution de problèmes nationaux. 413 680 \$ — 36 mois.
- 88-0236 Pêches artisanales (Colombie) Instituto Nacional de los Recursos Naturales Renovables y del Ambiente, Bogotá. Encourager le développement de deux collectivités de pêches artisanales dans la région de Santa Marta (sur la côte atlantique de la Colombie), grâce à la mise en application d'un modèle intégré qui coordonnera les études sur les ressources halieutiques, sur les modes de capture les plus appropriés, la manutention, le traitement et la mise en marché, et sur le développement communautaire. 502 300 \$ — 36 mois.
- 88-0240 Programme intégré sur les plantes racines (Philippines)* Visayas State College of Agriculture, Leyte. Adopter une approche intégrée réunissant dans le même programme des Philippines Root Crop Research and Training Centre la création, la mise à l'essai et le transfert de nouvelles technologies, grâce non seulement à des activités de sélection, de production et de traitement des plantes, mais aussi à des systèmes d'information et de communications appropriés de même qu'à des activités de formation. 1 435 000 \$ — 36 mois.
- 88-0253 Système de production d'huile et de protéines végétales (Kenya) — Phase II Egerton University, Njoro. Acquérir la base institutionnelle et la capacité de coordination nécessaires à des recherches soutenues sur les systèmes de production d'huile et de protéines en vue de répondre aux besoins nationaux de façon efficace et viable. 223 100 \$ — 7 mois.
- 88-0254 Technologie du manioc (Paraguay) — Phase II Secretaría de Extensión Agrícola y Ganadera, Asunción. Élaborer une technologie pouvant être utilisée par les petits exploitants agricoles pour accroître leur revenu grâce à des systèmes plus efficaces de production et d'utilisation du manioc. 228 800 \$ — 36 mois.
- 88-0261 Élevage en étagé (Chana) Council for Scientific and Industrial Research, Accra. Permettre à l'Institut of Aquatic Biology de mettre au point et de tester des méthodes qui permettront d'accroître l'élevage en étagé dans les exploitations agricoles du Ghana. 187 200 \$ — 36 mois.
- 88-0262 Bambou et rotin (Sri Lanka) — Phase II Ministry of Lands and Development, Colombo. Permettre à la Research Division, Forest Development, d'accroître la production de bambou et de rotin afin d'approvisionner les industries locales, et

- State College of Agriculture de définir les systèmes post-production de certaines cultures et d'examiner la condition et le rôle des membres du ménage agricole (particulièrement la femme) dans ces milieux. 82 900 \$ — 24 mois.
- 88-0183 Systèmes de culture et d'élevage (Thaïlande) — Phase II***
Ministry of Agriculture and Cooperatives, Bangkok. Permettre au Farming Systems Research Institute et au Khon Kaen Farming Systems Research and Development Unit de mettre au point une méthodologie et une technologie de recherche intégrée culture-élevage dans les régions arides du nord-est de la Thaïlande. 501 900 \$ — 36 mois.
- 88-0188 Réseau sur les pâturages andins (Amérique du Sud)**
Pontificia Universidad Católica de Chile, Santiago. Renforcer et harmoniser les programmes nationaux de recherche visant à améliorer les pâturages et accroître la production animale dans les régions élevées de l'Amérique du Sud. 438 600 \$ — 36 mois.
- 88-0189 Systèmes de production laitière (Chili) — Phase II**
Pontificia Universidad Católica de Chile, Santiago. Permettre à sa Faculté d'agronomie de mettre au point des systèmes de production laitière fondés sur l'utilisation rationnelle des ressources afin d'aider les petits agriculteurs de La Unión. 428 700 \$ - 36 mois.
- 88-0191 Pêches artisanales (Pérou)**
Instituto del Mar del Perú, Callao et Universidad Nacional de San Agustín, Arequipa. Accroître la production de la pêche artisanale dans trois collectivités côtières du Pérou grâce à un projet intégré dans lequel les aspects biologiques de la gestion des ressources de la pêche, la technologie appliquée au processus de production et les aspects socio-économiques seront évalués et améliorés par un groupe de recherche multidisciplinaire et les pêcheurs eux-mêmes. 224 500 \$ — 24 mois.
- 88-0193 Systèmes petits ruminants-huile de palme (Malaisie)**
Universiti Malaya, Kuala Lumpur. Permettre à l'Institut of Advanced Studies de mettre au point des stratégies appropriées d'intégration des systèmes de production des petits ruminants et de l'huile de palme. 344 800 \$ — 42 mois.
- 88-0195 L'espèce *Inga* (Pérou)**
Instituto Nacional de Investigación Agraria y Agroindustrial, Lima. Étudier les possibilités de l'espèce *Inga* comme composante de technologies agroforestières dans différentes conditions climatiques et pédologiques dans les tropiques humides. 67 380 \$ — 12 mois.
- 88-0208 Amélioration de la banane et de la banane plantain (Honduras) — Phase II**
Fundación Hondureña de Investigación Agrícola, La Lima. Créer et mettre à la disposition de tous les pays intéressés des variétés améliorées de la banane et de la banane plantain, résistantes à la maladie. 562 500 \$ — 36 mois.
- 88-0209 Systèmes d'élevage de chèvres (Mexique) — Phase II***
Instituto Nacional de Investigaciones Forestales y Agropecuarias, Coahuila. Mettre au point des systèmes améliorés d'élevage des chèvres pour les petits exploitants agricoles des États de Coahuila et de Zacatecas. 249 100 \$ — 36 mois.
- 88-0220 Boisement des zones arides (Pérou) — Phase II**
Instituto Nacional de Investigación Agraria y Agroindustrial, Lima. Mettre au point des techniques fiables et peu coûteuses pour l'établissement de peuplements forestiers irrigués qui serviront à l'alimentation du bétail, à la production de bois, à l'habitation et à la lutte contre l'érosion dans des sites ne se prêtant pas à la production agricole dans les plaines côtières arides du Pérou. 243 000 \$ — 36 mois.
- 88-0222 Fertilité des sols (Tanzanie)***
Sokoine University of Agriculture, Morogoro. Déterminer des moyens d'améliorer et de soutenir la fertilité des sols grâce à des procédés biologiques faisant appel à des méthodes adéquates de gestion des résidus des plantes. 37 400 \$ — 36 mois.
- 88-0223 Arbres fruitiers indigènes (Colombie)***
Universidad Distrital «Francisco José de Caldas», Bogotá. Permettre à la Facultad de Ingeniería Forestal de diversifier la production agricole dans les zones marginales de production de café, en mettant au point de meilleures techniques de culture de fruits indigènes comme le *lulo*. 15 100 \$ — 18 mois.
- 88-0224 Régénération des ignames-systèmes cultureaux (Jamaïque)**
Inter-American Institute for Cooperation in Agriculture, Kingston, en collaboration avec le Ministry of Agriculture, Jamaïque. Accroître les approvisionnements alimentaires à court terme et améliorer, en quantité et en qualité, les exportations d'ignames de la Jamaïque sur une base soutenue. 102 800 \$ — 12 mois.
- 88-0234 Séchoirs agricoles polyvalents (Thaïlande) — Phase II**
Université Chiang-Mai. Fournir aux agriculteurs et commerçants du nord de la Thaïlande des méthodes de séchage efficaces qui empêcheront les récoltes de se détériorer, et qui feront grimper la
- de plantation et d'utilisation du rolin pour assurer des approvisionnements stables. 187 500 \$ — 36 mois.
- 88-0151 Application de la méthodologie RSA (Chili)**
Grupo de Investigaciones Agrarias, Santiago. Élaborer une méthode de recherche sur les systèmes agricoles (RSA) pour répondre aux besoins des paysans chiliens et améliorer leur niveau de vie. 192 200 \$ — 36 mois.
- 88-0157 Systèmes de conditionnement de la viande (Inde)**
Central Leather Research Institute, Madras. Déterminer la viabilité de manutention et de commercialisation de la viande dans les États d'Andhra Pradesh, de Tamil Nadu, de Karnataka et de Rajasthan. 191 700 \$ — 18 mois.
- 88-0162 L'espèce *Prosopis* (Argentine)**
Instituto Argentino de Investigaciones en las Zonas Áridas, Mendoza. Exploiter le bassin génétique naturel de l'espèce *Prosopis* indigène en vue de la sélection et de l'amélioration génétiques. 125 800 \$ — 36 mois.
- 88-0167 Élevage bovin à double fin (Venezuela)***
Universidad Central de Venezuela, Maracay. Permettre à la Facultad de Ciencias Veterinarias de mettre au point une méthodologie d'évaluation et d'amélioration génétique des troupeaux laitiers et de promouvoir son application au Venezuela et dans d'autres pays tropicaux de l'Amérique latine. 239 500 \$ — 36 mois.
- 88-0173 Planification de la recherche agricole (Afrique de l'Est)**
Intergovernmental Authority on Drought and Development (IGADD), Djibouti. Évaluer et mettre au point des programmes efficaces de recherche agricole dans les pays membres d'IGADD. 200 000 \$ — 8 mois.
- 88-0178 Arbres autochtones (Mali) — Phase II***
Ministère de l'Environnement et de l'Élevage, Bamako. Permettre à l'Institut national de la recherche zootechnique, forestière et hydrobiologique d'étendre les superficies occupées par trois espèces agroforestières à production multiple, après la création de techniques de plantation, et d'assurer, grâce à une sylviculture adaptée, la survie de ces espèces en forêt. 99 000 \$ — 36 mois.
- 88-0182 Femmes et systèmes post-productions (Philippines)**
Regional Center for Graduate Study and Research in Agriculture, Laguna. Permettre au National Post-Harvest Institute for Research and Extension, Isabela State University et au Visayas

et de mettre au point des méthodes améliorées de transformation et d'utilisation du rotin. 188 200 \$ — 36 mois.

88-0099 Essais en ferme (Équateur)
Fundación para el Desarrollo Agropecuario, Quito, en collaboration avec l'Instituto Nacional de Investigaciones Agrícolas. Contribuer à l'amélioration du bien-être des petits agriculteurs de la province de Bolívar, en augmentant la productivité de leur système agricole et de l'élevage, grâce aux efforts conjugués des instituts de recherche, de vulgarisation et de soutien de la région. 70 000 \$ — 12 mois.

88-0107 Production laitière (Guyana) — Phase III
Caribbean Agricultural Research and Development Institute, Georgetown. Mettre au point de meilleurs systèmes de production animale pour les savanes intermédiaires et les régions côtières. 357 200 \$ — 36 mois.

88-0108 Réseau de recherche sur les sous-produits (Afrique) — Phase II
Centre international pour l'élevage en Afrique, Éthiopie. Renforcer les programmes nationaux de recherche agricole en Afrique et ainsi les aider à mener des activités pertinentes de recherche et de développement portant sur l'utilisation des sous-produits agricoles pour l'alimentation des animaux. 330 600 \$ — 24 mois.

88-0109 Mécanisation et développement de la culture des lentilles et des pois chiches (Jordanie) — Phase III
Université de Jordanie, Amman, en collaboration avec le ministère de l'Agriculture. Permettre d'améliorer la production de légumineuses par l'évaluation critique de technologies améliorées, de leur transfert aux agriculteurs et du renforcement de la vulgarisation et des activités d'autres organismes s'occupant d'amélioration des légumineuses. 381 200 \$ — 36 mois.

88-0110 Systèmes de culture et d'élevage (Indonésie) — Phase II
Central Research Institute for Food Crops, Bogor, en collaboration avec le Central Research Institute for Animal Sciences. Permettre d'élaborer des systèmes de production animale et culturale pour les régions pluviales élevées afin d'accroître la productivité et la stabilité des petites exploitations agricoles dans les régions de migration de l'Indonésie. 273 400 \$ — 36 mois.

88-0111 Action phytosanitaire planifiée (Afrique orientale et australe)
International Institute of Biological Control, Royaume-Uni. Permettre au Commonwealth Institute of Biological Control, Kenya, d'aider les programmes

nationaux de la région à élaborer des programmes de recherches efficaces de lutte contre les insectes et les parasites de tubercules alimentaires. 297 100 \$ — 24 mois.

88-0113 Plantations irriguées (Sénégal)*
Institut sénégalais de recherches agricoles, Dakar. Permettre au Département des recherches sur les productions forestières d'aider la vallée du fleuve Sénégal à devenir autosuffisante en bois de chauffage et de construction, grâce à des plantations irriguées à l'intérieur des zones agricoles. 148 200 \$ — 36 mois.

88-0114 Tubercules alimentaires (Libéria) — Phase II
Ministère de l'Agriculture, Monrovia. Permettre au Central Agricultural Research Institute d'améliorer la qualité et la quantité des tubercules alimentaires et des racines fourragères. 306 700 \$ — 36 mois.

88-0115 Systèmes de riziculture (Birmanie)
Institut international de recherches sur le riz, Philippines. Permettre à l'Agriculture Corporation de renforcer les capacités de la Birmanie en matière de recherches sur les systèmes de riziculture utilisant des technologies rentables et de faible consommation, et de minimiser les pertes durant la moisson par l'amélioration des méthodes de récolte et de manutention. 488 400 \$ — 36 mois.

88-0116 Diffusion des systèmes culturaux (Global) — Phase IV
Institut international de recherches sur le riz, Philippines. Aider divers pays à mettre au point de nouvelles technologies en déterminant les systèmes de riziculture plus productifs qui sont acceptables pour les petits agriculteurs. 868 000 \$ — 36 mois.

88-0117 Systèmes de culture de la banane (Ouganda)
Ministère de l'Agriculture, Entebbe, en collaboration avec la Fondation Rockefeller. Aider les agriculteurs à accroître la productivité et la rentabilité de leurs récoltes de banane. 250 700 \$ — 36 mois.

88-0120 Étude des pâturages en régions tropicales (Équateur) — Phase II*
Instituto Interamericano de Cooperación para la Agricultura, Quito, en collaboration avec l'Instituto Nacional de Investigaciones Agropecuarias. Améliorer la production animale des petits exploitants agricoles en créant de meilleures technologies de pâturage adaptées aux conditions agroécologiques de la région amazonienne de l'Équateur. 206 600 \$ — 36 mois.

88-0126 Rotin (Malaisie) — Phase II
Forest Research Institute Malaysia, Kuala Lumpur. Promouvoir la culture du rotin en produisant des guides de plantation, en conservant les ressources génétiques et en évaluant les aspects économiques des systèmes de culture intercalaire. 246 000 \$ — 36 mois.

88-0133 Gestion des données (IIR)
Institut international de recherches sur le riz (IIRR), Philippines, en collaboration avec le South-East Asia Regional Center for Graduate Study and Research in Agriculture. Accroître l'efficacité de la recherche sur les systèmes agricoles grâce à la mise au point d'outils informatisés pour la gestion des données et le choix des technologies. 224 200 \$ — 36 mois.

88-0134 Maladies des poissons marins (Malaisie) — Phase II
Universiti Sains Malaysia, Penang. Mettre au point des méthodes pratiques pour accroître le taux de survie, entre l'alevinage et la mise en marché, du mérou et du bar élevés en cages. 166 000 \$ — 24 mois.

88-0135 Socio-économie de la post-production (Afrique de l'Ouest)
Centre régional africain de technologie (CRAT), Sénégal. Permettre de renforcer l'aspect socio-économique des projets subventionnés par le CRDI dans la région, afin de promouvoir l'utilisation des résultats de la recherche en mettant au point des technologies à la fois économiquement viables et socialement acceptables. 363 000 \$ — 36 mois.

88-0137 Évaluation des systèmes d'irrigation (Zimbabwe)
Institut international de recherche sur les politiques alimentaires, États-Unis, en collaboration avec l'Université du Zimbabwe. Permettre de créer et d'essayer une méthode de recherche multidisciplinaire pour l'évaluation et l'analyse de la performance des systèmes d'irrigation. 197 300 \$ — 36 mois.

88-0146 Tubercules alimentaires (Malawi)*
Ministère de l'Agriculture, Lilongwe. Permettre à la Division de recherche du Ministère de renforcer son programme national de recherche et d'appliquer un programme complet de lutte contre les insectes et les parasites des principaux tubercules alimentaires. 223 000 \$ — 36 mois.

88-0148 Rotin (Indonésie) — Phase II*
Ministère des Forêts, Bogor, et Université Gadjah Mada, Yogyakarta. Permettre à l'Agency for Forest Research and Development et au Forest Research and Development Centre, en collaboration avec la Faculty of Forestry et le Herbarium Bogoriense de l'université, de mettre au point des techniques améliorées

88-0053 Réorientation de la formation en matière de vulgarisation pour les régions rurales (Malaisie)
Université Pertanian Malaysia, Selangor. Permettre au Centre for Extension and Continuing Education de mettre au point et de tester un nouveau programme de formation des agents de vulgarisation conçu en fonction des besoins des agents et de leurs clients, des politiques agricoles et innovations technologiques actuelles et prévues. 108 000 \$ — 33 mois.

88-0055 Etudes agro-industrielles (Amérique latine)
Centro Latinoamericano de Tecnología y Educación Rural, Colombie. Elaborer et appliquer un programme d'appui à la promotion et à l'établissement d'agro-industries rurales en Amérique latine. 41 400 \$ — 12 mois.

88-0056 Entreprises de conditionnement du poisson (Chili)
Centro de Educación, Desarrollo e Investigación de la Pesca Artesanal de Chile, Valparaiso. Mettre sur pied une entreprise de transformation du poisson dans une collectivité vivante de la pêche artisanale, afin de créer des emplois et des revenus. 179 900 \$ — 24 mois.

88-0057 L'espèce *Inga* (Amérique centrale)
Centro Agronómico Tropical de Investigación y Enseñanza, Costa Rica. Intégrer certaines variétés de la légumineuse *Inga* aux systèmes d'agro-forestière des petites fermes des régions tropicales humides de l'Amérique centrale. 73 900 \$ — 10 mois.

88-0061 Stockage du riz (Libéria)
Université de Liberia, Monrovia. Permettre au Département d'agriculture d'implanter de meilleurs systèmes de manipulation et de stockage du riz afin de réduire les pertes. 69 000 \$ — 24 mois.

88-0063 Culture de la patate douce dans les hautes terres (Philippines)
Benquelet State University, La Trinidad. Permettre au Northern Philippine Root Crop Research and Training Center, en collaboration avec la Kalahan Educational Foundation, d'améliorer la production de la patate douce (*camote*) et ainsi, l'autosuffisance alimentaire des habitants des régions montagneuses du nord des Philippines, tout en protégeant le sol fragile de ces régions. 73 850 \$ — 36 mois.

88-0064 Joboba (Chine)
Académie des sciences de Chine, Yunnan. Permettre à l'Institut de botanique de Kunming d'introduire des variétés améliorées de joboba et de mettre au point des techniques de plantation adaptées à la culture en sol chinois. 73 810 \$ — 24 mois.

88-0030 Réseau sur la nutrition du poisson (Asie)
Division des sciences de l'agriculture, de l'alimentation et de la nutrition du CRDI. Etablir un réseau de recherche sur la nutrition du poisson en Asie. 185 000 \$ — 36 mois.

88-0033 Algues (Chili) — Phase II
Universidad de Concepción. Contribuer à la bonne gestion des algues naturelles du Chili comme bases à l'élargissement des systèmes de mariculture. 10 000 \$ — 12 mois.

88-0036 Coordonnateur de réseau (Afrique australe)
Division des sciences de l'agriculture, de l'alimentation et de la nutrition du CRDI. Recruter un coordonnateur de réseau à temps partiel qui collaborera à l'élaboration de plusieurs projets financés par le Centre en Afrique australe portant sur l'introduction et l'évaluation de variétés de plantes pour les zones arides et semi-arides. 29 950 \$ — 12 mois.

88-0040 Amélioration des techniques de la pêche au thon (Brésil)
Superintendencia do Desenvolvimento da Pesca, Brasília. Aider les petites entreprises de pêche du nord-est du Brésil à capter plus de thons en se familiarisant davantage avec la répartition et l'abondance du thon et en utilisant des appâts artificiels. 193 800 \$ — 24 mois.

88-0043 Pommes (Inde)
Management Development Institute, Haryana. Améliorer les modes de manipulation, de transformation et de commercialisation des pommes dans l'Etat de l'Himachal Pradesh. 74 500 \$ — 24 mois.

88-0046 Agriculture durable (Philippines)
Université des Philippines, Los Baños. Améliorer la qualité de vie des agriculteurs dans le secteur visé par le projet et dans d'autres régions des Philippines, grâce à la mise au point et à l'application de meilleures techniques agricoles. 63 000 \$ — 36 mois.

88-0049 Embryons des huîtres (Malaisie)
Université Sains Malaysia, Pulau Pinang. Mettre sur pied et exploiter une éclosure-pilote d'huîtres (*Crassostrea belcheri*) faisant appel aux ressources de la Muka Head Biological Station afin d'élaborer et de diffuser des technologies d'élevage d'huîtres et en apponités pour l'élevage et en milieu naturel. 116 000 \$ — 36 mois.

88-0065 Bulletin sur l'agriculture durable (Malaisie)
Bureau régional pour l'Asie du Canadien University Service Overseas, Penang. Publier un bulletin de nouvelles qui servira à faciliter l'échange d'information et de rétroaction sur les questions importantes liées à une agriculture durable. 20 930 \$ — 24 mois.

88-0068 Mécanismes de production des semences (Gloabal)
Division des sciences de l'agriculture, de l'alimentation et de la nutrition du CRDI. Mener une étude sur neuf projets de phylosélection financés par le Centre qui ont réussi à distribuer aux agriculteurs des semences améliorées. 111 225 \$ — 18 mois.

88-0081 Amélioration de l'essence d'*Eucalyptus* (Chili)
Instituto Forestal, Santiago. Planifier et mettre au point un programme national de recherches pour l'amélioration génétique d'essences d'eucalyptus qui ont un potentiel de culture manifeste. 25 380 \$ — 36 mois.

88-0085 Brise-vent (Tunisie) — Phase III
Ministère de l'Agriculture, Tunis. Permettre à l'Institut national de la recherche agroéconomique de Tunisie d'assurer une diffusion des techniques d'installation et de gestion des brise-vent dans les zones irriguées. 237 900 \$ — 36 mois.

88-0092 Centre régional d'approvisionnement en graines (Zimbabwe) — Phase II
Zimbabwe Forestry Commission, Harare. Permettre au Forest Research Centre d'aider les pays d'Afrique orientale et australe à obtenir des semences d'arbres certifiées en mettant sur pied des services de formation, de traitement, d'entreposage, de test et de distribution de graines de qualité. 411 000 \$ — 48 mois.

88-0094 Recherche-développement alternative (Sénégal)*
Institut sénégalais de recherches agricoles, Dakar. Mettre au point et tester une méthodologie de diffusion des innovations techniques basées sur la collaboration entre l'institut de recherche, l'organisation paysanne et l'établissement de formation, avec la participation des organes de décision. 213 800 \$ — 36 mois.

88-0098 Rotin (Papouasie-Nouvelle-Guinée)
Ministry of Forests, Boroko, et Papua Nouvelle-Guinée)
Papouasie-Nouvelle-Guinée, d'élaborer des techniques permettant de les régénérer

Permettre au Département d'économie agricole et de gestion des exploitations agricoles de former un groupe d'étudiants africains faisant une maîtrise ou un doctorat en agriculture au Canada aux modes de communication et de gestion qui sont nécessaires à la recherche.

89 800 \$ — 6 mois.

88-1005 Programme de bourses

accordées à des jeunes chercheurs

canadiens (Gloab)

Division des bourses et Division des communications, CRDI. Favoriser le renforcement, au Canada, d'une capacité de recherche axée sur les priorités du Tiers-Monde en offrant un appui financier à des Canadiens qui veulent faire des recherches ou suivre la formation dans un pays du Tiers-Monde. 570 000 \$ — 12 mois.

88-1011 La formation des chercheurs

dans le domaine de l'éducation

(Tanzanie-Canada)

Université de Dar-es-Salaam, Tanzanie et Université de l'Alberta, Edmonton.

Renforcer et améliorer les capacités des ressources humaines du Département d'éducation, Université de Dar-es-Salaam. 73 200 \$ — 48 mois.

Sciences de

l'agriculture, de

l'alimentation et de la

nutrition

88-0003 Chachafaruto (Colombie)

Corporación Nacional de Investigación y Fomento Forestal, Bogotá. Accroître la productivité de sources nouvelles de protéines végétales dans les Andes colombiennes et promouvoir la culture dans les systèmes agro-sylvo-pastoraux. 19 040 \$ — 12 mois.

88-0004 Systèmes pastoraux

maghrebins (Maroc)

Institut agronomique et vétérinaire Hassan II, Rabat. Identifier et tester des interventions qui permettent une amélioration des conditions de vie et de travail des populations des steppes marocaines tout en sauvegardant l'environnement. 1 00 000 \$ — 15 mois.

88-0007 Nutrition du poisson (Asie)

Asian Institute of Technology, Thaïlande. Augmenter la production des poissons d'élevage en ajoutant des aliments étrangers fertilisés en ajoutant des aliments non conventionnels à leur régime alimentaire. 190 200 \$ — 36 mois.

88-0008 Commercialisation des

produits du sorgho (Lesotho)

Ministère de l'agriculture, Maseru. Permettre à la Division de la recherche agricole de mettre à l'épreuve des façons

d'augmenter la consommation et la demande de sorgho au Lesotho. 99 700 \$ — 24 mois.

88-0018 Réseau des pêches artisanales

(Chili)

Fundación para la Capacitación del Personal Artesanal, Santiago. Permettre

au Departamento de Biología y Tecnología Marina de la Pontificia Universidad Católica de Chile,

Talcahuano, de créer un réseau régional des pêcheurs artisanaux pour coordonner la recherche et le développement, assurer la liaison et faciliter l'échange

d'information, la formation spécialisée et le transfert technologique au sein des projets en cours. 167 500 \$ — 24 mois.

88-0019 Les portuses de bois de feu

(Éthiopie)

Bureau international du travail, Suisse. En collaboration avec le National Urban Planning Institute, Addis-Ababa,

contribuer à l'amélioration des conditions de vie et de travail des portuses de bois de feu à Addis-Ababa. 86 200 \$ — 15 mois.

88-0020 Production de semences

potagères (Thaïlande) — Phase III

Université de Chiang-Mai. Favoriser l'augmentation du revenu des paysans des tribus montagnardes en produisant des semences de légumes de grande qualité qui seront vendues aux organismes

gouvernementaux, au secteur privé et à des paysans de la Thaïlande et d'autres pays asiatiques. 347 100 \$ — 36 mois.

88-0021 Sésame et riziculture

(Philippines)

Central Luzon State University, Muñoz. Mettre au point des variétés de sésame adaptées à des systèmes agricoles fondés sur la riziculture. 68 500 \$ — 60 mois.

88-0022 Maladies des poissons

(Philippines) — Phase II

Bureau of Fisheries and Aquatic Resources, Quezon City. Accroître et renforcer ses capacités de prévenir, de contrôler, de diagnostiquer et de traiter les maladies des poissons qui causent de lourdes pertes aux pisciculteurs des Philippines. 204 000 \$ — 36 mois.

88-0023 Transformation des aliments

dans les Andes (Pérou)

Centro de Investigación, Educación y Desarrollo, Lima. Permettre à la Universidad Nacional del Altiplano, à la Universidad Nacional de San Antonio

Abad, à la Universidad Católica Agustín et à la Universidad Católica de Cuzco, de préserver les techniques de récolte, de préservation, de transformation et de commercialisation des produits agricoles dans les collectivités des Andes au sud du Pérou. 297 600 \$ — 36 mois.

88-0024 Légumineuses alimentaires

(Indonésie) — Phase II

Agency for Agricultural Research and Development, Djakarta. Permettre au

Central Research Institute for Food Crops et au Bogor Research Institute for Food Crops d'accroître la production de légumineuses afin d'augmenter la stabilité

et le revenu des exploitations agricoles et d'améliorer la nutrition. 361 700 \$ — 36 mois.

88-0025 Réseau de culture en couloirs

pour l'Afrique tropicale

Institut international d'agriculture tropicale, Nigéria, en collaboration avec le Centre international pour l'élevage en

Afrique, Éthiopie. Aider les programmes de recherche nationaux et internationaux de l'Afrique à mener des recherches sur le terrain (stations de recherche et exploitations agricoles). 250 000 \$ — 60 mois.

88-0026 Gestion des ressources

naturelles des terres communales

(Zimbabwe)

University of Zimbabwe, Harare. Permettre au Centre for Applied Social Sciences de réaliser des recherches

importantes sur la planification et les politiques des programmes participants; d'augmenter la capacité des collectivités

et des districts de planifier et d'appliquer des programmes de gestion des ressources; et de fournir un cadre de

recherche à un programme inter-disciplinaire d'études supérieures en vue d'une bourse zimbabwéenne en sciences

sociales dans le domaine de la gestion des ressources naturelles. 303 740 \$ — 24 mois.

88-0027 Système de production

d'huile et de protéines végétales (Kenya)

Egerton University, Njoro. Décrire le système de production d'huiles et de

protéines végétales au Kenya, afin de définir les recherches clés qui permettraient de supprimer les obstacles à la production et à la transformation locales des oléagineux. 234 100 \$ — 9 mois.

88-0028 Programme de formation en

technologie de production des

graminées (Afrique orientale et australe) — Phase II

Centre international pour l'élevage en Afrique, Éthiopie. Compléter et renforcer les activités de formation du Réseau de

recherche sur les pâturages pour l'Afrique orientale et australe, dans le domaine de l'agronomie des pâturages. 51 010 \$ — 6 mois.

88-0029 Le bœuf comme animal de

trait (Philippines)

University of the Philippines, Los Baños. Permettre au Department of Agricultural Economics d'étudier l'utilisation

d'animaux de trait dans les petites

recherche présentes au Centre et à d'autres organismes subventionnaires. 59 711 \$ — 12 mois.

88-0045 Formulation et analyse des projets de recherche (Afrique centrale et occidentale)

Institut de formation et de recherche démographiques, Cameroun. Aider les chercheurs et les étudiants d'instituts de recherche en sciences sociales de la région à formuler et à rédiger des projets de recherche pouvant être acceptés par les organismes de financement. 151 135 \$ — 6 mois.

88-0058 Cours de formation : Les microordinateurs et la recherche et l'analyse de données en santé (Afrique orientale et australe) — Phase II

Université de Nairobi, Kenya. Permettre au Département de technologie alimentaire et de nutrition de familiariser son personnel avec les microordinateurs et les techniques de traitement des données. 71 992 \$ — 6 mois.

88-0096 Cours de formation : techniques de reproduction des poissons (Brésil) — Phase III

Centro de Pesquisas e Treinamento em Aquicultura, São Paulo. Offrir de la formation pratique et théorique sur la reproduction des poissons, le traitement et l'élevage des larves dans le cadre de projets de pêche parrainés par le CRDI en Amérique latine et dans les Antilles, afin de relever la capacité de recherche locale en matière d'élevage de poissons d'eau douce. 78 710 \$ — 6 mois.

88-0097 Participation des femmes à la politique (Amérique latine)

Centro de Investigación para la Acción Femenina, République dominicaine. Initier les participantes à l'analyse de travaux de recherche sur la contribution des femmes à certains processus sociaux, notamment ceux qui concernent l'administration publique et le gouvernement local. 28 405 \$ — 6 mois.

88-0131 Programme d'études supérieures en collaboration (Antilles) — Phase IV

Université des Indes occidentales, Jamaïque. Continuer à appuyer son programme d'études supérieures afin de renforcer ses capacités d'enseignement et de recherche. 588 806 \$ — 36 mois.

88-0143 Recherche et formation en économie rurale (Afrique de l'Ouest) — Phase IV

Université nationale de Côte d'Ivoire, Abidjan. Permettre au Centre ivoirien de recherches économiques et sociales (CIREES) de renforcer le soutien institutionnel du CRDI au CIREES en octroyant huit bourses d'études et deux subventions de recherche pour des étudiants en année de doctorat pour

88-0144 MSC avec spécialisation en génie de l'équipement agricole (Thaïlande)

Université Khon Kaen. Permettre à des organismes universitaires et gouvernementaux de mettre en oeuvre le plan national de mécanisation de la Thaïlande en aidant quatre membres du personnel de ces organismes à terminer une maîtrise en mécanisation agricole de l'université. 38 740 \$ — 30 mois.

88-0145 Formation des formateurs — SIPC (Philippines)

Philippine Partnership for the Development of Human Resources in Rural Areas, Manille. Mettre à jour le développement du système d'information et de planification communautaires (SIPC) 15 membres du personnel de formation à la recherche de neuf organismes non gouvernementaux axés sur le développement. 18 920 \$ — 12 mois.

88-0149 Méthodes de développement des ressources humaines féminines en recherche-développement au Congo

Direction générale de la recherche scientifique et technique, Brazzaville. Promouvoir la participation des femmes à la science et à la technologie en montrant à 40 scientifiques de sexe féminin comment formuler un projet de recherche, comment définir des thèmes prioritaires dans le domaine des femmes et du développement et comment comprendre les problèmes liés au développement de ressources scientifiques féminines. 28 058 \$ — 3 mois.

88-0150 Perfectionnement des ressources humaines en recherche sur les pêches (Népal)*

Division des bourses du CRDI. Aider le National Centre for Aquaculture and Allied Training, Département of Agriculture, Karamandou, à former des scientifiques et des techniciens chevronnés et novices à la recherche sur les pêches, et ainsi favoriser l'application du programme de développement des pêches du Népal. 113 200 \$ — 40 mois.

88-0176 Programme de stages (Global)

Division des bourses du CRDI. Offrir des stages de formation à des chercheurs enver lesquels le CRDI s'est déjà engagé. 230 000 \$ — 24 mois.

88-0206 Programme de stagiaires (Global) — Phase II

Division des bourses du CRDI. Donner à huit stagiaires l'occasion de participer aux activités courantes d'une division ou d'un bureau régional du Centre sur une période de 2 ans. 270 000 \$ — 24 mois.

88-0229 Presses universitaires en Amérique latine et dans les Antilles

Centro Regional para el Fomento del Libro en América Latina y el Caribe, Colombia. Appuyer la formation de 19 éditeurs de publications scientifiques en Amérique latine et dans les Antilles et leur permettre d'acquies des compétences dans les domaines de la planification des publications, de la diffusion des résultats de la recherche et de la gestion de l'édition. 39 140 \$ — 6 mois.

88-0244 Méthodes de recherche sur le rôle des sexes (Afrique orientale et australe) — Phase III

Eastern and Southern Africa Management Institute, Tanzanie. Perfectionner une équipe de chercheurs-cadres possédant les compétences appropriées et sensibilisés à la recherche sur l'égalité des sexes et consolider le réseau de chercheurs et d'agents de développement intéressés à la recherche sur le rôle des sexes. 130 000 \$ — 12 mois.

88-0245 Formation aux principes de base d'analyse agro-économique (Sénégal)*

École nationale d'économie appliquée, Dakar. Initier les chercheurs des sciences exactes aux principes de base de l'analyse économique des expérimentations et les aider à acquies les outils élémentaires qui leur permettront de mener à bien ces analyses. 75 190 \$ — 6 mois.

88-0279 Formation en gestion-administration en santé (Afrique de l'Ouest)

Centre africain d'études supérieures en gestion, Sénégal. Exploiter les résultats de recherche du projet *Recherche en gestion-administration en santé* subventionné par le Centre en vue de créer un module de cours de formation en gestion des services de santé en Afrique francophone à l'intention des cadres de la santé publique de tous les niveaux. 486 600 \$ — 36 mois.

88-0313 Bourses Femmes et développement (FED) — Phase II

Division des sciences sociales, CRDI. Appuyer une deuxième série de bourses d'études Femmes et développement (FED). 200 000 \$ — 24 mois.

88-0368 Bourses Environnement et développement (Global)

Division des sciences sociales, CRDI, en collaboration avec la Division des bourses. Fournir du soutien à au moins dix étudiants ou chercheurs chevronnés qui entreprendront des projets de formation sur l'environnement et le développement, ou qui contribueront à la réalisation de tels projets. 200 000 \$ — 24 mois.

88-1003 Atelier sur la gestion de la recherche (Afrique-Canada)

Université du Manitoba, Winnipeg.

Projets ayant fait l'objet d'affectation de fonds au cours de l'année budgétaire 1988-1989

Bureau de direction

88-0203 Défense et développement en Asie du Sud-Est — Phase II
Institut of Southeast Asian Studies, Singapour. Diffuser les résultats de la recherche à l'échelle nationale dans le cadre d'une série de séminaires nationaux, et de renforcer la collaboration entre les chercheurs et les militaires sur la question délicate des dépenses de défense et de leur impact sur le développement.
101 900 \$ — 12 mois.

Communications

88-0073 Version anglaise de «Nord-Sud» (Canada)
Metavidea Associates Inc., Québec. Produire une émission de télévision sur le développement international. 50 000 \$ — 3 mois.

88-0100 Utilisation de la technologie du bambou (Chine) — Phase III
Chinese Academy of Forestry, Beijing. Recherche au Subtropical Forestry Research Institute de diffuser les techniques améliorées de culture du bambou mises au point dans le cadre d'un projet précédent financé par le CRDI à l'intention des producteurs de bambou.
44 867 \$ — 36 mois.

88-0119 Transfert de la technologie des pêches en Amérique latine*
Pontificia Universidad Católica de Chile, Santiago. Permettre au Departamento de Biología y Tecnología Marina de participer aux activités de formation et de transfert de technologies des projets de développement des pêches artisanales appuyés par le CRDI en Amérique latine.
237 842 \$ — 36 mois.

88-0202 Promotion d'un jeu d'instruments articulés sur micro-ordinateur (Global)
National University of Singapore. Répandre l'utilisation des instruments mis au point dans le cadre du projet *Jeux ordinaires* (Singapore) financé par le Centre, concevoir et produire du matériel de communication multi-médias à l'appui

1. L'astérisque indique que l'accord entre le CRDI et le bénéficiaire n'a peut-être pas été signé.

de l'utilisation de ces instruments.
100 000 \$ — 24 mois.

88-0219 Méthodologie de communication dans les années quatre-vingt (Amérique latine)
Pontificia Universidad Javeriana, Colombie. Permettre à la Faculté de communication sociale d'examiner les changements qui se sont produits au cours des années 80 et tenter d'en faire une analyse critique et actuelle dont les conclusions seront utiles à la fois pour la planification des activités de recherche et pour la prise de décisions en matière de communications. 15 084 \$ — 10 mois.

88-0258 Diffusion du système de captage d'eau en béton armé (Philippines)*

Capiz Development Foundation Inc., Roxas City. Encourager l'utilisation, dans la province de Capiz, de la technologie de captage de l'eau de pluie dans des réservoirs en béton armé, afin de procurer un approvisionnement adéquat en eau potable aux habitants de cette région.
302 500 \$ — 60 mois.

88-0289 Série sur l'environnement pour la télévision (Global)

BBC/Open University, Royaume-Uni. Produire une série de huit vidéos pour la télévision traitant des grandes questions environnementales et des liens entre l'environnement et le développement. La série, produite en consultation avec les experts du CRDI, constitue un élément d'un cours inter-faculté sur le développement s'adressant à des étudiants inscrits à un programme menant à un diplôme. 335 000 \$ — 12 mois.

88-0408 Vidéo pour la conférence sur le SIDA (Global)

Global Village Information Inc., Suède. Faciliter une meilleure compréhension des liens entre les comportements humains et la nature bio-médicale du SIDA et fournir un outil pédagogique (vidéo) à ceux et celles qui travaillaient avec les jeunes.
147 980 \$ — 4 mois.

88-1050 Méthodes de formation à la production de vidéos (Global-Canada)

Instituto para América Latina, Pérou et Vidéo Tiers Monde, Québec. Produire un module de formation composé de cassettes vidéo et d'un manuel qui permettra à des groupes du Tiers-Monde d'utiliser plus efficacement la technologie du vidéo de petit format dans la réalisation de leurs objectifs. 89 628 \$ — 12 mois.

Division des bourses

88-0013 Bourses : Académie de droit international de La Haye (Global)
Académie de droit international de La Haye, Pays-Bas. Collaborer à la formation de jeunes juristes des pays en développement à certains aspects du droit international et offrir un soutien canadien aux programmes de formation de praticiens et de chercheurs en droit du Tiers-Monde. 30 000 \$ — 12 mois.

88-0017 Bourses : réponse des hommes au changement planétaire (Global)

International Federation of Institutes of Advanced Studies, Ontario, à titre de secrétaire intérimaire du programme Réponse des hommes au changement planétaire. Offrir deux bourses à des chercheurs de pays en développement et leur donner ainsi l'occasion d'acquiescer la formation en planification et application du programme et de se familiariser avec les questions à résoudre, tout en s'assurant que la perspective du Tiers-Monde est prise en considération dans le cadre du programme. 70 000 \$ — 18 mois.

88-0041 Formation FRIM-INTAN en gestion de la recherche en foresterie (Asie du Sud-Est)

Forest Research Institute Malaysia (FRIM) et Institut Tabirran Awam Negara (INTAN), Malaisie. Former les chefs de projet de huit activités financées par la division des SAA/N à la théorie et aux pratiques de la gestion de la recherche.
18 100 \$ — 6 mois.

88-0042 Transfert technologique : industries du bois (Brésil)

Universidade de São Paulo. Permettre à l'Instituto de Pesquisas Tecnológicas, en collaboration avec la International Union of Forest Research Organizations, d'appréhender de transfert des connaissances relatives aux technologies forestières et aux méthodes de transformation du bois des laboratoires nationaux vers l'industrie sud-américaine. 57 485 \$ — 6 mois.

88-0044 Méthodes de recherches appliquées aux services de santé (République dominicaine)

Universidad Autónoma de Santo Domingo. Renforcer la capacité de recherche de certains instituteurs d'Amérique centrale et de la République dominicaine, afin d'améliorer la qualité des projets de

Annexe 2

Dépenses d'administration
pour l'exercice terminé le 31 mars 1989

	1989	1988
Traitements et prestations	\$6 117 923	\$ 6 523 077
Locaux	1 546 887	1 460 730
Dépenses de bureau et divers	867 119	643 705
Déplacements et déménagements	279 704	513 214
Réunions des gouverneurs	279 395	363 618
Amortissement	260 525	323 311
Services professionnels et spéciaux	283 168	270 587
Télécommunications	190 329	174 484
Dépenses de groupes de travail	19 041	62 258
Assurances	43 338	28 004
	<u>\$9 887 429</u>	<u>\$10 362 988</u>

Centre de recherches pour le développement international

Dépenses de recherche et de soutien pour l'exercice terminé le 31 mars 1989

	1989		1988	
	Recherche en développement	Activités reliées à la recherche	Soutien à la recherche opérationnelle	Total
Programmes				
Sciences de l'agriculture, de l'alimentation et de la nutrition	\$21 911 128	\$ 5 064 039	\$ 1 206 258	\$ 28 181 425
Sciences sociales	10 097 831	3 530 678	944 776	14 573 285
Sciences de la santé	8 784 650	2 916 391	999 033	12 700 074
Sciences de l'information	8 268 304	2 713 555	1 041 304	12 023 163
Sciences de la terre et du génie	6 859 979	1 562 983	518 921	8 941 883
Bourses	5 664 225	874 305	315 723	6 854 253
Activités reliées aux programmes				
Bureaux régionaux	—	1 304 172	7 175 783	8 479 955
Division des communications	894 121	4 172 278	758 501	5 824 900
Activités des programmes spéciaux	5 357 033	355 147	—	5 712 180
Bibliothèque spécialisée en recherche en développement	—	1 722 497	—	1 722 497
Liaison et relations extérieures	37 981	749 718	286 525	1 074 224
	<u>\$67 875 252</u>	<u>\$24 965 763</u>	<u>\$13 246 824</u>	<u>\$106 087 839</u>
				<u>\$96 037 935</u>

Exercice se terminant le 31 mars

1990	\$ 5 808 867
1991	5 078 998
1992	4 568 377
1993	4 518 363
1994-1997	19 746 318
	<u>\$39 720 923</u>

9. Engagements contractuels — Subventions et élaboration de projets

Le Centre s'est engagé à verser des subventions totalisant au plus \$104 400 000 au cours des quatre prochains exercices, à condition que le Parlement du Canada mette les fonds nécessaires à sa disposition et à condition que les bénéficiaires se conforment aux modalités de subvention des projets. Le Centre a également offert de façon officielle des subventions à des bénéficiaires susceptibles de les recevoir, pour un montant total de \$43 600 000; il attend l'acceptation de ces offres.

10. Chiffres comparatifs

Les chiffres de l'exercice précédent ont été reclassés afin de rendre leur présentation conforme à celle de l'exercice courant.

5. Fondations

En 1987, la succession du regretté John Bene a créé une fondation qui doit être consacrée à l'octroi de bourses d'études supérieures en foresterie sociale. Durant la même année, un ancien Gouverneur du Centre a établi une fondation pour la recherche appliquée ou consacrée à remplir une mission particulière.

Solde au début de l'exercice	\$151 273	\$138 465
Intérêts créditeurs	13 919	12 658
Dons reçus	5 000	5 150
Dépenses	(4 751)	(5 000)
Solde à la fin de l'exercice	\$165 441	\$151 273
John Bene	\$154 882	\$146 160
Gouverneur	10 559	5 113
Total des fondations	\$165 441	\$151 273

6. Créditeurs et frais courus

Frais courus – projets	\$ 7 278 920	\$5 704 488
Prestations courues de congés	1 221 879	1 313 885
Autres	3 872 897	2 403 288
	1989	1988
	\$12 373 696	\$9 421 661

7. Contrats de recherche

Les contrats de recherche se rapportent à la recherche exécutée ou gérée par le Centre et à la Ve conférence internationale sur le sida, organisée par le Centre. Ces contrats sont financés par d'autres organisations internationales, l'Agence canadienne de développement international (ACDI) et d'autres agences gouvernementales fédérales.

Les dépenses de contrats de recherche de \$4 198 988 (1988, \$2 107 575) comprennent \$2 431 480 déboursés au nom de l'ACDI (1988, \$1 436 190). De plus, le Centre a reçu \$24 511 de frais d'administration de l'ACDI (1988, \$56 489); ces frais sont inclus dans les intérêts sur placements et autres revenus.

Les fonds pour les contrats de recherche inclus dans le passif au montant de \$2 532 328 (1988, \$685 697) comprennent \$608 257 détenus pour l'ACDI (1988, \$332 537).

8. Contrats de location-exploitation

Le Centre a conclu différents contrats de location pour des bureaux, du matériel et du logement pour le personnel tant au Canada que dans plusieurs autres pays. En vertu de ces contrats de location, les engagements annuels du Centre sont les suivants :

Loyer différé

Les gratuités ou autres avantages reliés à des contrats de location à long terme sont différés et amortis selon la méthode linéaire pendant la durée du contrat.

Coût du régime de retraite

Les employés du Centre participent au Régime de retraite de la Fonction publique fédérale administré par le gouvernement du Canada. L'employé et le Centre doivent cotiser au Régime. Ces cotisations représentent la totalité de la responsabilité du Centre et elles sont comptabilisées sur une base courante.

Impôts sur le revenu

Le Centre est exempt des impôts sur le revenu.

Conversion des devises étrangères

La conversion des devises étrangères en dollars canadiens se fait selon un taux de change moyen qui est très près du taux de change en vigueur à la date de l'opération. L'actif et le passif monétaires sont réglés selon le taux de change en vigueur à la fin de l'exercice. Les gains et les pertes réalisés lors des opérations de change sont imputés aux résultats de l'exercice courant.

3. Encaisse et dépôts à court terme

1989		1988	
Encaisse (décaouvert bancaire)		\$ 211 052	
Dépôts à court terme		13 731 820	
Banques à charte canadiennes		3 867 140	
Compagnies hypothécaires et de fiducie		994 020	
Entreprises commerciales		\$18 804 032	

Ce montant inclut \$2 654 512 (\$756 979 en 1988) reçus pour des contrats de recherche et la V^e conférence internationale sur le SIDA.

4. Immobilisations

1989		1988	
Amortissement		Net	
Coût	cumulé	Net	
Matériel informatique		\$1 715 871	
Mobiliier et matériel		\$2 593 069	
de bureau		774 663	
Véhicules		742 632	
Améliorations locales		496 299	
Système téléphonique		163 821	
\$9 501 370	\$4 730 886	\$3 427 620	
\$759 418	\$595 597	\$287 562	
1 764 660	268 361	259 310	
1 363 216	620 584	540 545	
1 920 671	1 146 008	624 332	

L'amortissement pour l'exercice s'établit à \$995 099 (1988, \$944 724).

1. Statut et objectif

Le Centre de recherches pour le développement international est une société sans capital-actions, créée en 1970 par une loi du Parlement du Canada appelée la Loi sur le Centre de recherches pour le développement international. Le Centre a reçu une subvention annuelle du Parlement du Canada en conformité avec le Crédit 50 du ministère des Affaires extérieures, ceci pour les exercices terminés le 31 mars 1989 et le 31 mars 1988 respectivement.

Le Centre a pour objectif d'entreprendre, d'encourager, de soutenir et de poursuivre des recherches sur les problèmes des régions du monde en développement et sur les moyens d'application et d'adaptation des connaissances scientifiques, techniques et autres au progrès économique et social de ces régions.

2. Principales conventions comptables

Les états financiers ont été préparés conformément aux principes comptables généralement reconnus au Canada, en accord avec les normes comptables internationales, et traduisent les conventions suivantes :

Immobilisations

Les immobilisations sont comptabilisées au prix coûtant et sont amorties sur la durée estimative de leur utilisation. Les améliorations locales sont amorties selon la durée des contrats de location respectifs. Les méthodes comptables et les taux annuels prévus pour l'amortissement des immobilisations sont les suivants :

Méthode	Taux (%)
Matériel informatique	20
Améliorations locales	5-50
Mobilier et matériel de bureau	20
Véhicules	30
Système téléphonique	20
Linéaire	20
Linéaire	20
Solde dégressif	20
Solde dégressif	30
Linéaire	20

Comptabilisation des revenus

Les subventions du Parlement sont inscrites selon la méthode de la comptabilité d'exercice.

Les revenus tirés des contrats de recherche sont comptabilisés lorsque les dépenses afférentes sont engagées. L'excédent des revenus sur les dépenses des contrats de recherche est inclus dans le passif à court terme.

Indemnités de cessation d'emploi courues

Les employés bénéficient de certaines indemnités de cessation d'emploi calculées selon le salaire au moment de la cessation et selon les conditions d'emploi. Le passif résultant de ces indemnités est comptabilisé au fur et à mesure que les montants s'accumulent au crédit de l'employé.

État de l'avoir du Canada		pour l'exercice terminé le 31 mars 1989	
		1989	1988
Solde au début de l'exercice	\$ 8 571 166	\$ 2 554 926	
Excédent des revenus sur les dépenses	5 317 610	6 016 240	
Solde à la fin de l'exercice	\$13 888 776	\$ 8 571 166	

État de l'évolution de la situation financière

1988		1989	
Activités d'exploitation			
Encaisse provenant de l'exploitation		\$ 5 317 610	
Excédent des revenus sur les dépenses		\$6 016 240	
Éléments ne comportant aucun mouvement de fonds			
Amortissement		995 099	
Réserve pour indemnités de cessation d'emploi		551 298	
Gain lors de l'aliénation d'immobilisations		(27 883)	
		6 836 124	
		7 238 501	
Variations de l'actif et du passif d'exploitation hors caisse			
Débiteurs		(149 640)	
Frais payés d'avance		(421 094)	
Dépôts recouvrables		14 291	
Créditeurs et frais courus		2 952 035	
Paiement d'indemnités de cessation d'emploi		(370 338)	
Contrats de recherches courus		1 846 631	
Loyer différé		(304 874)	
		10 403 135	
		10 605 713	
Activités d'investissement			
Acquisition d'immobilisations		(2 349 863)	
Produit de l'aliénation d'immobilisations		39 783	
		(2 310 080)	
		(982 929)	
Augmentation des fonds			
		8 093 055	
		9 622 784	
Encaisse et dépôts à court terme			
au début de l'exercice		18 804 032	
		9 181 248	
Encaisse et dépôts à court terme			
à la fin de l'exercice		\$26 897 087	
		\$18 804 032	

Etat des résultats		pour l'exercice terminé le 31 mars 1989	
		1989	1988
DÉPENSES			
Recherche en développement			
Subventions de projets	\$ 56 898 932	6 777 332	6 301 802
Projets du Centre		4 198 988	2 107 575
Contrats de recherche (note 7)			
		<u>67 875 252</u>	<u>62 362 973</u>
Activités reliées à la recherche			
Assistance technique	14 471 250	13 612 515	
Elaboration et financement de projets	6 382 458	5 265 836	
Diffusion de l'information	2 389 558	2 071 295	
Bibliothèque spécialisée en recherche et développement	1 722 497	1 482 233	
	<u>24 965 763</u>	<u>22 431 879</u>	
Soutien à la recherche opérationnelle			
Bureaux régionaux	7 175 783	5 827 616	
Gestion des divisions	6 071 041	5 415 467	
	<u>13 246 824</u>	<u>11 243 083</u>	
Total des dépenses de recherche et de soutien (annexe 1)			
Dépenses d'administration (annexe 2)	9 887 429	10 362 988	
	<u>115 975 268</u>	<u>106 400 923</u>	
REVENUS			
Subvention du Parlement du Canada	114 200 000	108 100 000	
Intérêts sur placements et autres revenus	2 893 890	2 209 588	
Contrats de recherche (note 7)	4 198 988	2 107 575	
	<u>121 292 878</u>	<u>112 417 163</u>	
	<u>\$ 5 317 610</u>	<u>\$ 6 016 240</u>	
EXCÉDENT DES REVENUS SUR LES DÉPENSES			

États financiers pour l'exercice terminé le 31 mars 1989

Bilan au 31 mars 1989

	1989	1988
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ACTIF

À court terme

Encaisse et dépôts à court terme (note 3)	\$26 897 087	\$18 804 032
Débiteurs	888 653	739 013
Frais payés d'avance	1 394 660	973 566
	<u>29 180 400</u>	<u>20 516 611</u>

Dépôts recouvrables
Immobilisations (note 4)
Fondations (note 5)

	<u>183 430</u>	<u>197 721</u>
	<u>4 770 484</u>	<u>3 427 620</u>
	<u>165 441</u>	<u>151 273</u>
	<u>\$34 299 755</u>	<u>\$24 293 225</u>

PASSIF

À court terme

Créditeurs et frais courus (note 6)	\$12 373 696	\$ 9 421 661
Fonds pour les contrats de recherche (note 7)	2 532 328	685 697
	<u>14 906 024</u>	<u>10 107 358</u>

Indemnités de cessation d'emploi courues
Loyer différé – Siège social
Fondations (note 5)

	2 722 679	2 541 719
	2 616 835	2 921 709
	165 441	151 273

Avoir du Canada

	<u>13 888 776</u>	<u>8 571 166</u>
	<u>\$34 299 755</u>	<u>\$24 293 225</u>

Approuvé : le Président

le Trésorier

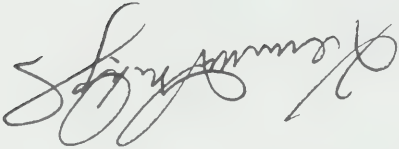
RAPPORT DU VÉRIFICATEUR

Au Centre de recherches pour le
développement international
et au
Secrétaire d'Etat aux Affaires extérieures

J'ai vérifié le bilan du Centre de recherches pour le développement international au 31 mars 1989 ainsi que les états des résultats, de l'avoir du Canada et de l'évolution de la situation financière pour l'exercice terminé à cette date. Ma vérification a été effectuée conformément aux normes de vérification généralement reconnues au Canada, en accord avec les Normes de vérification internationales, et a comporté par conséquent les sondages et autres procédés que j'ai jugés nécessaires dans les circonstances.

À mon avis, ces états financiers présentent fidèlement la situation financière du Centre au 31 mars 1989 ainsi que les résultats de son exploitation et l'évolution de sa situation financière pour l'exercice terminé à cette date selon les principes comptables généralement reconnus au Canada, en accord avec les Normes comptables internationales, appliqués de la même manière qu'au cours de l'exercice précédent.

Le vérificateur général du Canada



Kenneth M. Dye, F.C.A.

Ottawa, Canada
le 2 juin 1989



Niveau des années-personnes

1989-1990	1988-1989	1987-1988
Budget	Budget	Budget
Réalisations	Réalisations	Réalisations

DIVISIONS DE PROGRAMME	298,00	300,00	271,20	297,50	285,50
Sciences de l'agriculture, de l'alimentation et de la nutrition	48,50	50,00	44,80	50,50	50,00
Sciences sociales	48,00	48,50	43,30	48,00	45,75
Sciences de l'information	42,50	41,50	37,70	39,50	37,75
Personnel rattaché aux projets	36,50	37,50	33,50	39,50	36,75
Sciences de la santé	36,00	36,00	31,50	35,00	35,00
Communications	26,00	25,50	22,50	26,00	22,25
Personnel rattaché aux projets	19,00	19,00	17,40	18,00	19,75
Sciences de la terre et du génie	18,00	19,00	17,50	18,00	15,50
Bureau de planification et d'évaluation	12,00	11,00	11,40	11,00	11,00
Bourses	11,50	12,00	11,60	12,00	11,75

ADMINISTRATION GÉNÉRALE	158,50	161,50	156,20	163,50	161,25
Bureau du Trésorier	39,00	39,00	37,70	97,00	92,00
Administration*	35,00	37,00	35,60		
Traitement électronique des données*	14,00	14,00	13,40	19,50	21,50
Bureau des ressources humaines	19,50	19,50	21,70	15,00	16,25
Bureau du Secrétaire et Conseiller juridique	17,00	15,00	16,40	19,00	19,00
Bureau de direction	15,00	18,00	14,30	8,00	8,00
Administration des bureaux régionaux	14,00	14,00	13,70	5,00	4,50
Vérification interne	5,00	5,00	3,40		

DÉTACHEMENTS, CONGÉS D'ÉTUDES OU SABBATIQUES	3,00	5,00	0,00	3,00	3,00
TOTAL : PERSONNEL ENGAGÉ AU SIÈGE	459,50	466,50	427,40	464,00	449,75

* Figurant en 1987-1988 sous le titre «Bureau du Trésorier».

Exposé financier sur cinq ans (000 \$)

Budget 1989-1990 1988-1989 1987-1988 1986-1987 1985-1986 Réalisations

RÉSULTATS DES OPÉRATIONS

Revenus	\$112 900	\$121 293	\$112 417	\$102 401	\$89 663
Subvention du Parlement du Canada	108 500	114 200	108 100	100 000	86 000
Placements et autres revenus	2 200	2 894	2 210	978	1 881
Contrats de recherche	2 200	4 199	2 107	1 423	1 782
Dépenses	\$123 900	\$115 975	\$106 401	\$100 969	\$91 486
Recherche pour le développement*	73 213	67 875	62 362	60 382	54 585
Activités reliées à la recherche	24 008	10 495	8 820	8 421	7 003
Aide opérationnelle à la recherche	14 983	27 718	24 856	22 812	21 183
Administration générale	11 696	9 887	10 363	9 354	8 715
Excédent des revenus sur les dépenses (des dépenses sur les revenus)	(\$11 000)	\$5 318	\$6 016	\$1 432	(\$1 823)

ACTIVITÉS DE PROGRAMME

Affectations	\$115 852	\$141 265	\$124 904	\$111 517	\$102 199
Nouveaux projets**	75 000	103 659	89 685	79 351	72 301
Services techniques	14 173	14 471	13 613	12 876	12 012
Administration générale	11 696	9 887	10 363	9 354	8 715
Bureaux régionaux	7 514	7 177	5 828	5 394	4 947
Administration des divisions	7 469	6 071	5 415	4 542	4 224
Engagements	\$135 160	\$126 834	\$120 154	\$105 099	\$95 383
Projets***	94 308	89 228	84 935	72 933	65 485
Services techniques	14 173	14 471	13 613	12 876	12 012
Administration générale	11 696	9 887	10 363	9 354	8 715
Bureaux régionaux	7 514	7 177	5 828	5 394	4 947
Administration des divisions	7 469	6 071	5 415	4 542	4 224
Engagements en cours	\$113 300	\$104 400	\$96 000	\$88 343	\$88 900

* Incluant les contrats de recherche.
 ** Incluant les projets préliminaires des divisions.
 *** Excluant les contrats de recherche (projets spéciaux).

Faits saillants financiers (000 \$)

1987-1988 vs 1988-1989 (% de variation)	Écart en pourcentage de Réalisations 1987-1988	Budget 1988-1989	Réalisations 1988-1989
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OPÉRATIONS FINANCIÈRES

Revenus	\$119 500	\$121 293	1,5	\$112 417	7,9
Subvention du Parlement du Canada	114 200	114 200	0,0	108 100	5,6
Contrats de recherche	3 200	4 199	31,2	2 107	99,3
Placements et autres revenus	2 100	2 894	37,8	2 210	31,0
Dépenses	\$121 100	\$115 975	4,4	\$106 401	9,0
Projets en cours*	53 440	50 309	5,9	47 630	5,6
Nouveaux projets*	29 100	28 060	3,6	23 552	19,1
Services techniques	15 180	14 471	4,7	13 613	6,3
Administration générale	9 870	9 887	(0,2)	10 363	(4,6)
Bureaux régionaux	7 450	7 177	3,7	5 828	23,1
Administration des divisions	6 060	6 071	(0,2)	5 415	12,1
Excédent des revenus sur les dépenses (des dépenses sur les revenus)	(\$1 600)	\$5 318	432,4	\$6 016	11,6

ACTIVITÉS DE PROGRAMME

Affectations	\$142 590	\$141 265	0,9	\$124 904	13,1
Nouveaux projets	104 030	103 659	0,4	89 685	15,6
Services techniques	15 180	14 471	4,7	13 613	6,3
Administration générale	9 870	9 887	(0,2)	10 363	(4,6)
Bureaux régionaux	7 450	7 177	3,7	5 828	23,1
Administration des divisions	6 060	6 071	(0,2)	5 415	12,1
Engagements	\$133 420	\$126 834	4,9	\$120 154	5,6
Projets	94 860	89 228	5,9	84 935	5,1
Services techniques	15 180	14 471	4,7	13 613	6,3
Administration générale	9 870	9 887	(0,2)	10 363	(4,6)
Bureaux régionaux	7 450	7 177	3,7	5 828	23,1
Administration des divisions	6 060	6 071	(0,2)	5 415	12,1

*Incluant les contrats de recherche et les projets préliminaires des divisions.

Le Vérificateur général du Canada fait un examen indépendant des états financiers conformément aux normes de vérification généralement reconnues et donne son opinion sur ces états. Son examen comprend une étude et une évaluation du système de contrôle du CRDI et la conduite de sondages et l'application de méthodes qui l'autorisent à faire état de la justesse de la présentation des états financiers. Le Comité des finances et de la vérification du Conseil est à l'entière disposition des vérificateurs externes.

Affectations

Les affectations totales du CRDI pour 1988-1989 ont été de 141,3 millions de dollars par rapport à 124,9 millions de dollars en 1987-1988, soit une augmentation de 13,1 % par rapport à l'exercice précédent. Cette somme comprend 103,7 millions de dollars affectés aux nouveaux projets, soit 73,4 % des affectations totales de l'exercice. La figure 3 illustre les affectations selon la région géographique.

En 1989-1990, les affectations totales devraient atteindre 115,9 millions de dollars, dont 75 millions, ou 64,7 % du total, seront réservés au programme.

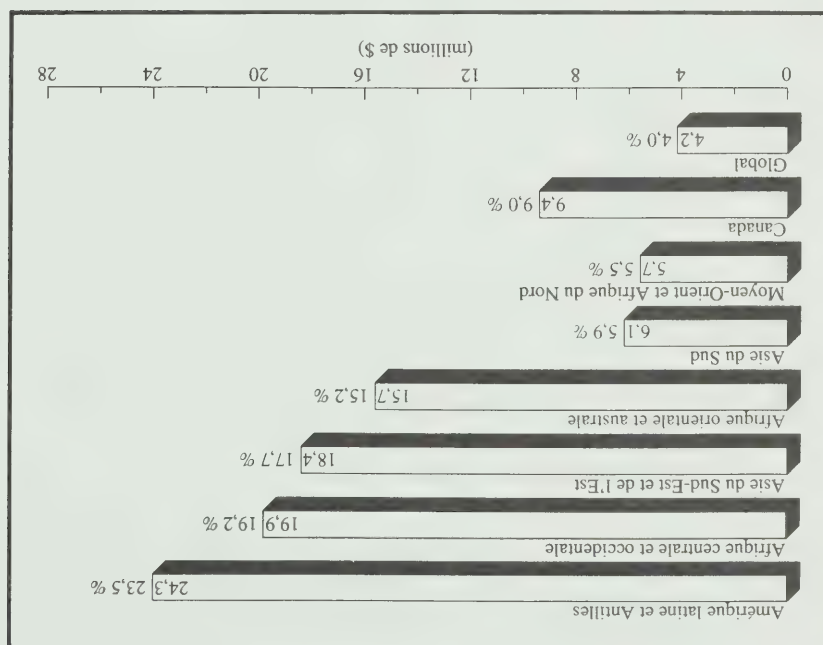


Figure 3. Affectations réalisées en 1988-1989 par région.

Responsabilité pour les états financiers

Les états financiers ont été préparés par la direction conformément aux principes comptables généralement reconnus qui conviennent dans les circonstances. La direction assume également la responsabilité pour toutes les autres informations contenues dans le Rapport annuel, qui concorde, s'il y a lieu, avec celles contenues dans les états financiers. Pour bien s'acquiescer de cette responsabilité, la direction s'appuie sur des méthodes et des systèmes de contrôle financiers et gestionnels qui garantissent, de manière raisonnable, la fiabilité des informations financières, la protection des biens et l'efficacité d'exécution des activités. Le CRDI a un service de vérification interne dont les fonctions normales comprennent la révision périodique des contrôles financiers internes et leur application.

Le Conseil des gouverneurs est chargé de s'assurer que la direction assume ses responsabilités en matière de communication de l'information financière et de contrôle interne. Il le fait par l'entremise du Comité des finances et de la vérification, dont les membres ne sont pas des employés du CRDI. Le Comité rencontre régulièrement la direction, les vérificateurs internes et les vérificateurs externes.

Il est prévu que les dépenses pour les bureaux régionaux resteront, en 1989-1990, au même niveau qu'en 1988-1989, soit à 7,5 millions de dollars, à cause de l'annulation des nouvelles années-personnes et de la réduction du budget des déplacements.

Administration des divisions

Les dépenses d'administration des divisions se sont élevées à 6,1 millions de dollars en 1988-1989, soit une augmentation de 12,1 % par rapport à 1987-1988, et ont représenté 5,3 % des dépenses totales du CRDI en 1988-1989. Cette hausse est attribuable principalement aux coûts plus élevés de location des locaux du siège.

Il est prévu que les dépenses d'administration des divisions augmenteront de 23 % en 1989-1990, atteignant environ 7,5 millions de dollars. La part des dépenses totales du CRDI que représente cette catégorie augmentera légèrement, passant de 5,3 % en 1988-1989 à 6,1 % en 1989-1990.

Administration générale

L'ensemble des activités du CRDI nécessite une politique, une direction, une administration et des services. Ces fonctions sont assumées par le Conseil des gouverneurs ainsi que par le Bureau de direction, le Secrétaire et Conseiller juridique, le Trésorier et le Bureau des ressources humaines et, enfin, par les services d'administration, de traitement électronique des données et de vérification interne.

Les dépenses d'administration générale se sont élevées à 9,9 millions de dollars en 1988-1989, soit une diminution de 4,6 % par rapport à l'exercice précédent. Cette diminution est principalement attribuable aux économies réalisées au titre des salaires et des avantages sociaux et des dépenses de déplacement. La part des dépenses totales du CRDI que représente cette catégorie a diminué, passant de 9,8 % en 1987-1988 à 8,5 % en 1988-1989. Il est prévu que les coûts d'administration passeront à 11,7 millions de dollars en 1989-1990, soit une augmentation de 18,2 % par rapport à 1988-1989.

Avoir du Canada

L'avoir du Canada, au 31 mars 1989, a augmenté à 13,9 millions de dollars par rapport à 8,6 millions pour l'exercice précédent. Cette forte hausse est attribuable à des revenus plus élevés que prévu et à la proportion moins élevée des dépenses du programme, comme nous l'avons déjà expliqué. On prévoit qu'en 1989-1990, l'avoir du Canada en fin d'exercice baissera à 2,9 millions de dollars.

Années-personnes

En 1988-1989, les années-personnes du CRDI pourvues par le siège ont totalisé 427,4 par rapport aux 466,5 prévues. Les vacances furent concentrées dans le secteur des services techniques et s'expliquent par le retard à combler les postes vacants. En 1989-1990, on prévoit que le nombre des années-personnes pourvues par le siège sera de 459,5.

Recherche pour le développement

La recherche pour le développement reflète les coûts directs de tous les projets de recherche scientifique et technique financés par le CRDI dans les pays en développement. Elle est la raison d'être du CRDI. Cette catégorie comprend le financement des projets du CRDI et des réseaux internationaux de recherche; les projets identifiés, élaborés et administrés par des chercheurs des pays en développement et les projets de recherche à contrat administrés au nom d'autres agences subventionnaires.

En 1988-1989, les dépenses relatives aux activités de recherche pour le développement se sont élevées à 67,9 millions de dollars ou 58,5 % des dépenses totales du CRDI. Les dépenses pour les projets en cours, qui dans la majorité des cas sont des dépenses de recherche pour le développement, ont été supérieures, de 5,6 %, à celles de l'exercice précédent. Cependant, les dépenses pour de nouveaux projets ont augmenté de 19,1 % par rapport à 1987-1988.

Activités liées à la recherche

Les activités liées à la recherche comprennent de petits projets qui permettent d'élaborer des projets de recherche et d'aider à la diffusion ou à l'application efficace de résultats de recherche. Ces activités permettent également de maintenir une bibliothèque spécialisée en recherche pour le développement, qui dessert la communauté canadienne du développement et le personnel du CRDI, et de mettre sur pied des activités restreintes de soutien aux programmes du CRDI.

En 1988-1989, les dépenses pour les activités liées à la recherche se sont élevées à 10,5 millions ou 9,1 % des dépenses totales du CRDI.

Services techniques

Cette catégorie de dépenses comprend le coût du personnel des programmes dont le rôle est d'élaborer de nouveaux projets, de suivre les projets de recherche en cours et de fournir une assistance technique aux bénéficiaires. En 1988-1989, les dépenses pour les services techniques ont été de 14,4 millions de dollars ou 12,4 % des dépenses totales du CRDI, soit une faible baisse par rapport à 1987-1988.

Pour 1989-1990, on prévoit des dépenses de 14,2 millions de dollars pour les services techniques, soit une diminution de 1,4 % attribuable à l'annulation des nouvelles années-personnes et à la réduction du budget des déplacements. La part de cette catégorie par rapport aux dépenses totales baissera à 11,5 %.

Bureaux régionaux

Les six bureaux régionaux jouent un rôle important car ils aident le CRDI à maintenir de meilleurs contacts avec les bénéficiaires des subventions et à mieux répondre aux besoins du Tiers-Monde. Ces bureaux sont situés en Colombie, en Égypte, en Inde, au Kenya, au Sénégal et à Singapour. Le coût total de fonctionnement de ces bureaux en 1988-1989 a été de 7,2 millions de dollars, soit une augmentation de 23,1 % par rapport à 1987-1988. Cette catégorie de dépenses représente 6,2 % des dépenses totales du CRDI pour 1988-1989.

international (ACDI) pour des travaux de recherche exécutés ou administrés par le CRDI en son nom, et la somme de 1,6 million de dollars reçue de Santé et Bien-être Canada pour la Ve Conférence internationale sur le SIDA organisée par le Centre.

Pour 1989-1990, on prévoit un revenu total de 112,9 millions de dollars, soit une baisse de 6,9 % par rapport à 1988-1989.

Dépenses

En 1988-1989, les dépenses totales du CRDI se sont chiffrées à 116 millions de dollars, soit une augmentation de 9,6 millions de dollars ou 9 % par rapport à l'exercice précédent. La figure 2 illustre le pourcentage de chaque catégorie de dépenses en 1988-1989.

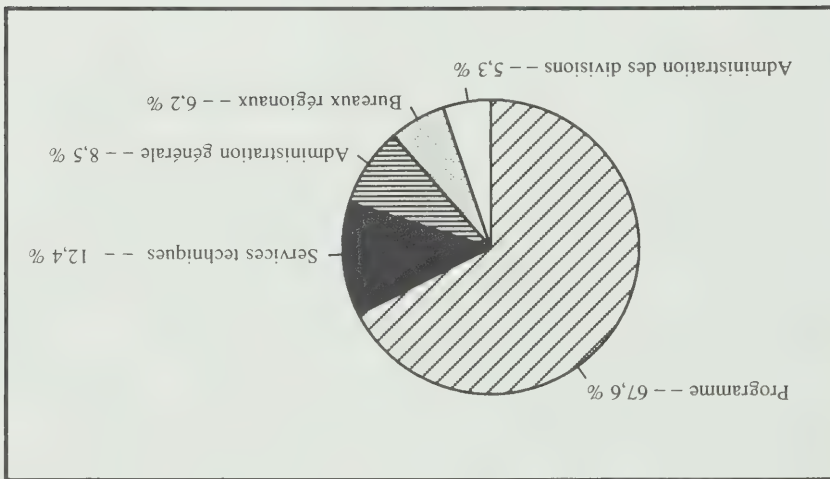


Figure 2. Ventilation des dépenses réalisées en 1988-1989.

Le tableau suivant compare les dépenses prévues (budget) pour 1989-1990 et les dépenses réelles (réalisations) en 1988-1989 et au cours des trois années précédentes (en millions de dollars).

	Budget					Réalisations				
	1989- % du total	1988- % du total	1987- % du total	1986- % du total	1985- % du total	1989- % du total	1988- % du total	1987- % du total	1986- % du total	1985- % du total
Recherche pour le développement	\$ 73,2	59,1	\$ 67,9	58,5	\$ 62,4	58,6	\$ 60,4	59,8	\$ 54,6	59,7
Services techniques	14,2	11,5	14,4	12,4	13,6	12,8	12,9	12,8	12,0	13,1
Administration générale	11,7	9,4	9,9	8,5	10,4	9,8	9,4	9,3	8,7	9,5
Activités reliées à la recherche	9,8	7,9	10,5	9,1	8,8	8,3	8,4	8,3	7,0	7,7
Bureaux régionaux	7,5	6,1	7,2	6,2	5,8	5,5	5,4	5,3	5,0	5,5
Administration des divisions	7,5	6,1	6,1	5,3	5,4	5,1	4,5	4,5	4,2	4,6
Total	\$123,9	100,0	\$116,0	100,0	\$106,4	100,0	\$101,0	100,0	\$91,5	100,0

Exposé financier et faits saillants

En 1988-1989, le Centre de recherches pour le développement international a reçu une subvention totale de 114,2 millions de dollars, qui représentait 3,9 % de la somme globale consacrée à l'aide publique au développement (APD) pour cet exercice. Pour l'exercice 1989-1990 la subvention du Centre a été réduite à 108,5 millions de dollars.

En 1988-1989, le Centre a maintenu le blocage des effectifs au siège social et a mis en oeuvre une série de recommandations visant à accroître l'efficacité et l'efficience de son exploitation.

Revenu

Le revenu total du CRDI a été de 121,3 millions de dollars, soit une augmentation de 7,9 % par rapport à l'exercice précédent. Les revenus comprennent la subvention du Parlement de 114,2 millions de dollars, des revenus de 2,9 millions de dollars provenant de placements et d'autres sources ainsi que des revenus de contrats de recherche de 4,2 millions de dollars. La figure 1 illustre la tendance au titre du revenu au cours des cinq dernières années.

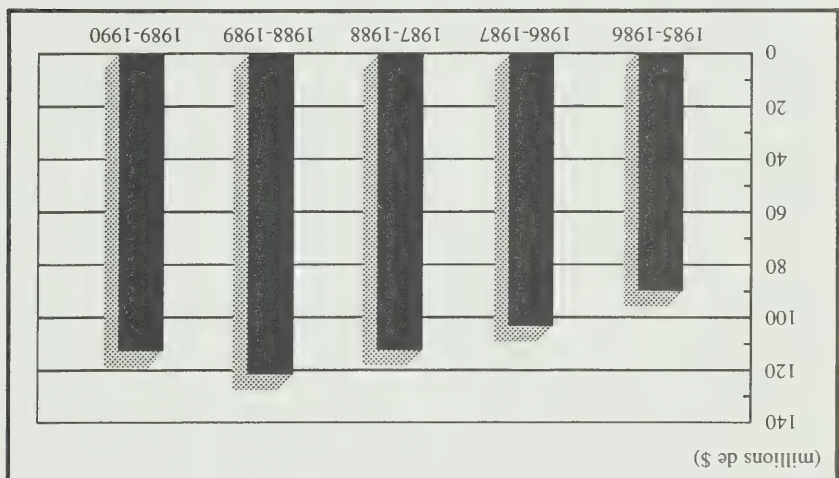


Figure 1. Revenu total du CRDI de 1985-1986 (réalisations) à 1989-1990 (budget).

La subvention du Parlement pour 1988-1989, d'un montant de 114,2 millions de dollars, représente une augmentation de 6,1 millions de dollars, ou 5,6 % par rapport à l'exercice précédent. La somme de 2,9 millions de dollars provenant de placements et d'autres sources de revenu en 1988-1989 a été supérieure à l'objectif budgétaire prévu de 2,1 millions de dollars. Le revenu de placements a été de 2,6 millions de dollars, le budget prévoyant 1,8 million de dollars. Cet écart positif est attribuable aux investissements et à leur rendement plus élevés que prévus. Quant au revenu provenant d'autres sources, il a été de 0,3 million de dollars, conformément au budget. Ce chiffre comprend 0,2 million de dollars de droits de licence de MINISIS et 0,1 million de dollars provenant d'autres sources.

Les travaux de recherche à contrat ont généré des revenus de 4,2 millions de dollars en 1988-1989. Ce chiffre comprend la somme de 2,4 millions de dollars reçue de l'Agence canadienne de développement

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piéd d'un grand réseau, basé en Afrique, sur le rôle des fermes dans la gestion des ressources naturelles. La Section continue de travailler en étroite collaboration avec les autres divisions du CRDI et avec les bureaux régionaux, pour les amener à tenir compte, s'il y a lieu, de l'analyse du rôle des sexes dans tous les projets appuyés par le Centre.

En 1988-1989, la Section a lancé des activités de formation interne en organisant un atelier d'une journée sur l'analyse du rôle des sexes dans la conception de la recherche à l'intention du personnel de la Division des sciences de l'agriculture, de l'alimentation et de la nutrition. La Section a continué d'appuyer l'Institut de cours d'étude sur le rôle des sexes et le développement des universités St Mary's et Dalhousie, à Halifax, de même que des activités régionales de formation au Brésil et en Tanzanie. Grâce à son programme de stages internes, des chercheurs de l'Argentine, du Brésil, de l'Inde, des Philippines et de la Thaïlande, ont pu passer jusqu'à six mois à travailler dans les différentes divisions du CRDI, au siège social d'Ottawa.

Politiques nationales et participation

Le Programme des politiques nationales et de la participation est une activité expérimentale dont l'objet est d'étudier de quelle façon les questions d'ordre politique et bureaucratique influencent les politiques administratives adoptées par les gouvernements, particulièrement lorsqu'elles visent les groupes les plus défavorisés d'un pays en développement.

Un important projet de réseau de recherche sur la participation communautaire en Amérique centrale et dans les Antilles regroupe des équipes du Costa Rica, de Cuba, de la Jamaïque, du Nicaragua et du Canada. Il est coordonné par le Centre de recherche sur l'Amérique latine et les Antilles de l'Université York de Toronto.

Initiatives de la Division

Le fonds des initiatives de la Division a pour but d'appuyer des recherches innovatrices qui ne correspondent pas aux activités régulières des programmes. Notons particulièrement, au cours de l'année passée, l'octroi d'une subvention au Conseil pour le développement de la recherche économique et sociale en Afrique, pour lui permettre de poursuivre des travaux visant à renforcer la recherche en sciences sociales. Cette subvention a été consentie en collaboration avec diverses autres divisions du Centre.

planification de politiques et de programmes pour les organisations non gouvernementales, et sur la façon de renforcer les méthodes de recherche qualitative.

En Asie, on s'est particulièrement efforcé d'évaluer les institutions et les principales questions liées à la recherche dans le domaine de l'éducation communautaire non structurée. On a également prévu d'appuyer des recherches sur le développement de l'enfant et le planning familial en Asie du Sud, et sur l'interaction entre population, santé et développement en Asie du Sud-Est. Des questions similaires feront probablement aussi l'objet de travaux au Moyen-Orient.

Le Programme a également accordé une importance particulière à l'évaluation des recherches passées et à la diffusion de leurs résultats. Un grand nombre d'ouvrages rédigés par suite de ces recherches ont été publiés par le CRDI ou par des institutions de recherche ou des maisons d'édition locales (voir les pages 68 à 80 de la section anglaise).

Développement régional

En 1988-1989, le Programme de développement régional a appuyé des recherches sur les politiques de logement et de services au logement, de gestion urbaine, de développement rural et de planification régionale.

Le Programme a accepté de financer deux importants projets en Asie, l'un sur le développement des régions reculées du Népal et l'autre sur l'industrialisation régionale en Malaisie. En Afrique, le Programme a appuyé des projets sur le logement non réglementé au Kenya, la gestion urbaine au Nigéria, la politique foncière en Ouganda et la sécurité alimentaire en milieu rural au Zimbabwe. En Amérique latine, on a soutenu des projets sur les terrains urbains en Equateur, sur les villes intermédiaires et le développement régional au Mexique, sur les petites entreprises et sur le logement social au Pérou, et sur les désastres naturels en Amérique centrale. Deux projets ont été approuvés, l'un sur les moyens de transport économiques en Chine — en collaboration avec l'Université de Calgary — et l'autre sur la production alimentaire en République dominicaine — avec la participation de l'Université de Sherbrooke.

Deux importants ateliers internationaux sur le gouvernement local en Afrique du Sud et au Zimbabwe, et sur la gestion urbaine en Afrique ont aussi été réalisés grâce à l'appui de la Division.

Environnement

Cette année, la Division des sciences sociales a mis sur pied un nouveau groupe à l'échelle du Centre, la Section de l'environnement, qui a pour objet à la fois d'appuyer des travaux de recherche sur l'environnement et le développement durable et d'offrir des services consultatifs aux nombreux projets et programmes du Centre qui ont une dimension environnementale. La Section a pour mandat d'appuyer des projets qui correspondent fortement à sa politique, mais également de cerner, aux fins de l'analyse scientifique, des domaines qui ne sont pas actuellement abordés par d'autres programmes du Centre, notamment la protection de l'habitat.

Pendant sa première année d'existence, la Section a appuyé huit nouveaux projets, soit seule, soit en collaboration avec d'autres programmes et divisions, notamment un réseau de recherches sur l'utilisation de l'énergie et la pollution de l'air dans les villes de l'Asie du Sud-Est et un examen de l'utilisation des terres communales au Zimbabwe. En collaboration avec la Division des bourses, la Section a également mis sur pied un programme de bourses en environnement qui appuieront la formation et financeront des travaux de recherche. En outre, des fonds ont été réservés pour s'assurer que les étudiant(e)s faisant des études de maîtrise en environnement soient admissibles aux bourses.

Femmes et développement

La Section Femmes et développement a été mise sur pied à titre d'activité à l'échelle du Centre en 1987; elle a pour objet d'appuyer des travaux de recherche sur l'intégration des femmes au développement et d'agir en tant que groupe-ressource pour la recherche sur les rôles des sexes. En 1988-1989, la Section a continué d'élargir son portefeuille de projets et d'activités de formation dans différentes régions du monde. Ces projets portaient sur la participation des femmes au développement industriel, à la production agricole, aux activités du secteur non structuré et à divers aspects du développement social et politique. Un projet particulièrement intéressant visait la mise sur

Politique économique

Le Programme de politique économique continue d'établir des liens entre des chercheurs de différents pays qui travaillent sur des questions similaires. Une activité importante en 1988-1989 a été la mise sur pied d'un nouveau réseau d'étude des politiques industrielles regroupant huit pays d'Afrique francophone. Administré par le Conseil pour le développement de la recherche économique et sociale en Afrique (Sénégal), avec le soutien technique du Centre de recherche et de développement en économie de Montréal, le réseau relie des chercheurs et des décideurs et ses activités sont coordonnées avec celles de divers autres donateurs.

Un réseau plus restreint sur les politiques industrielles en Amérique latine poursuit ses travaux; un de ses projets en Uruguay a récemment reçu un renouvellement de financement. En collaboration avec le Programme des Nations Unies pour le développement, le Programme de la politique économique a co-financé une subvention de deux ans en faveur de la Conférence des Nations Unies sur le commerce et le développement, pour l'aider à organiser des services de soutien technique sur les questions monétaires internationales à l'intention de 24 pays en développement.

Population, éducation et société

Le Programme Population, éducation et société a été constitué en 1988 à partir des anciens programmes de l'éducation et de la recherche sur la population et sur le développement. Ses travaux se concentrent dans quatre domaines de recherche : la dynamique des populations, les systèmes et procédés d'éducation, la survie et le développement humains et les connaissances et cultures indigènes.

Le Programme a appuyé en Afrique subsaharienne une série de projets visant à acquérir de nouvelles connaissances sur les processus du développement et à renforcer la capacité de recherche de chercheurs et d'institutions. Un grand nombre de ses activités ont porté sur les problèmes de la mortalité maternelle et infantile. D'autres études ont mis l'accent sur le rôle des langues nationales dans les écoles et sur l'efficacité globale et l'impact de l'éducation de base.

En Amérique latine, le Programme a appuyé divers projets en collaboration avec la Division des sciences de la santé, et on a jeté les bases d'une coopération plus poussée dans le domaine de l'éducation sanitaire. On a également procédé à des études sur la façon d'utiliser les résultats de recherches démographiques à des fins de participation.

d'information de la Ligue arabe, à Tunis, on compte maintenant quatre centres de service MINISIS.

De plus, le réseau MINISIS a été renforcé en permettant l'engagement de ressources locales en Colombie et au Mexique, en créant un programme de stages et en installant deux spécialistes en Inde et au Cameroun. Pendant ce temps, on a augmenté les possibilités de MINISIS et facilité son utilisation.

La bibliothèque du Centre

Au cours de l'année dernière, les services de la bibliothèque ont été réorganisés afin de mieux servir les usagers et de permettre à la bibliothèque de mieux conseiller et former ses clients. On a accru les services aux usagers et l'autonomie des petites bibliothèques sises dans les bureaux régionaux du CRDI. La bibliothèque du Centre a la réputation de détenir l'une des meilleures collections de volumes sur la recherche pour le développement. L'année dernière, la bibliothèque a accueilli les archives de la Commission mondiale sur l'environnement et le développement (la Commission Brundtland) dont les documents ont été transférés sur microfilms et dont l'index est maintenant incorporé aux bases de données de la bibliothèque.

Sciences sociales

92 projets, 15,3 millions de dollars

En 1988-1989, la Division des sciences sociales a mis en oeuvre les recommandations d'une étude approfondie de ses programmes qui s'est terminée en mars 1988.

Les activités de la Division correspondent à ses trois grands programmes : Politique économique; Population, éducation et société; et Développement régional. En outre, deux sections qui relèvent de la Division (Environnement et Femmes et développement) desservent le Centre dans son ensemble. La Division a été la première à établir de telles sections à l'échelle du Centre qui, pour des raisons d'ordre administratif, relèvent d'une seule division, mais dont les activités touchent plusieurs divisions. Les sections ont des mandats précis pour soutenir la recherche interdisciplinaire et intersectorielle et s'intéressent à des questions précises qui recourent de nombreux secteurs « traditionnels » de soutien de la recherche. En outre, la Division continuera d'appuyer pendant encore deux ans un programme expérimental de recherche sur les politiques nationales et la

cartographie assistée par ordinateur afin de représenter des données complexes indispensables à la planification régionale. Le système d'information mis au point permettra aux planificateurs d'évaluer le progrès socio-économique dans l'Etat du Bihar.

Un atelier sur la télétection a réuni des experts du Bénin, du Cameroun, du Ghana, du Nigeria et du Zimbabwe, à Lagos (Nigeria), en octobre dernier afin de discuter des techniques nécessaires pour cartographier les ressources de l'Afrique. La Division tiendra compte des conclusions de cet atelier dans sa planification. La Division a aussi financé un atelier sur l'utilisation des systèmes experts en agriculture aux Philippines, en juin dernier. En tout, neuf systèmes pour des applications en agriculture ou en développement rural ont été présentés, la plupart étant conçus pour mettre les résultats de la recherche à la portée des vulgarisateurs et des producteurs agricoles. Un autre projet, au Pérou, sur l'évaluation des entreprises du secteur public par des systèmes experts devrait contribuer à une amélioration de la performance des sociétés d'Etat, qui constituent un très important secteur de l'économie péruvienne. Cette technique pourrait éventuellement renforcer la capacité locale d'évaluation du rendement des entreprises. Enfin, la Division envisage le recours aux systèmes experts dans une foule de domaines afin de transmettre aux décideurs et praticiens les résultats de la recherche.

Le logiciel MINISIS

Le logiciel MINISIS, système interactif sur microordinateur pour la saisie de l'information et la gestion des bibliothèques, est un logiciel puissant créé par la Division des sciences de l'information pour les bibliothèques et d'autres clients. Au cours de l'année dernière, la décentralisation des services aux usagers et des programmes de développement de MINISIS a continué à progresser afin d'accroître l'autonomie des nombreux usagers de ce logiciel dans les pays en développement.

Deux autres centres de service MINISIS ont été ouverts, l'un d'envergure nationale à la Shreevani Nathibai Damodar Thackersey Women's University, en Inde, tandis que celui de l'Organisation africaine de la propriété intellectuelle, à Yaoundé, au Cameroun, doit servir les pays francophones de l'Afrique de l'Ouest. Le personnel formé dans ces deux centres répondra aux demandes des usagers, formera du personnel et développera d'autres applications selon les besoins locaux. Avec le ScienTech Information Centre, en Chine, et le Centre de documentation et

cours de cette phase, les services et produits du Réseau seront plus diversifiés afin de répondre non seulement aux besoins des scientifiques, mais aussi aux besoins des vulgarisateurs.

De même, une nouvelle phase du Système d'information sur les pêcheries indonésiennes apportera des informations sur les pêches à 23 centres locaux, se rapprochant ainsi de façon importante des utilisateurs de ce type d'information. Tandis qu'une subvention au International Board of Soil Research and Management, Thaïlande, le dotera d'un service d'information afin de partager des informations utiles et de renforcer les capacités de traitement de l'information des réseaux en gestion des sols et des services nationaux de recherche agricole.

L'information à la portée des usagers

En 1988-1989, la Division a confirmé sa volonté de répondre à des besoins précis au lieu de continuer à appuyer de vastes systèmes internationaux d'information. En effet, il y a plus de chances que l'on trouve la solution aux problèmes de développement en créant des systèmes d'information conçus pour répondre aux besoins précis des décideurs, des chercheurs, des agents de développement et des communautés. Très souvent, cette politique nécessite une collaboration étroite avec des organisations non gouvernementales tel le Consumer Information Resource Centre, en Inde. Grâce au soutien du CRDI, ce Centre pourra répondre aux demandes d'information de 200 groupes de consommateurs urbains et ruraux qui s'activent à protéger les droits des populations défavorisées de l'Inde et à améliorer leur qualité de vie. En Côte d'Ivoire, un projet similaire avec l'Institut africain pour le développement économique et social devrait mettre à la portée des populations rurales des techniques susceptibles d'améliorer leurs conditions de vie. Les fonds du CRDI serviront à produire des documents accessibles aux communautés qui sont socialement, géographiquement et scolairement désavantagées tout en permettant au personnel du Centre de se familiariser avec les techniques audiovisuelles.

Les nouvelles techniques de l'information

De nouvelles techniques de l'information ont été testées dans le cadre de plusieurs projets pilotes. Par exemple, les résultats d'une expérience de gestion des terres et de lutte contre les inondations mettant à contribution le Système d'information géographique de la région du lac Dongting, en Chine, seront partagés avec d'autres pays. En Inde, la Division a accepté de financer une expérience de

Environ la moitié des fonds de la Division ont été dirigés vers l'Afrique. En Ethiopie, un important projet de création d'une institution de formation en sciences de l'information a été démarré. Ce programme d'études avancées a été créé afin de répondre à la demande croissante de spécialistes après à gérer les ressources en information indispensables au développement de l'Afrique. Les diplômés trouveront des emplois comme planificateurs et gestionnaires de systèmes d'information ou comme enseignants et spécialistes de la formation dans ce domaine.

La Division a appuyé plusieurs systèmes d'information spécialisés, en Afrique. Par exemple, le Système d'information industrielle du Kenya s'appuiera sur la masse déjà considérable de données sur les industries kényanes. Ceci s'inscrit dans la volonté de la Division de renforcer la capacité de traiter l'information industrielle dans les pays d'Afrique de l'Est afin d'en soutenir le développement.

Un projet pilote en gestion de dossiers, en Ouganda, mettra à profit les conseils d'archivistes chevronnés du Kenya, de Tanzanie, de l'Ouganda et de Zambie. On espère que cet encouragement de la coopération régionale et du partage d'expériences dans le domaine de la gestion des archives améliorera les processus de prise de décisions et d'élaboration des politiques gouvernementaux.

Le Centre régional africain de technologies a aussi été appuyé afin d'en faire le moteur d'un réseau d'échanges et de diffusion d'informations sur les technologies alimentaires, pour l'Afrique.

L'Afrique au sud du Sahara souffre de réseaux de communication déficients, de manque de personnel et de l'absence d'institutions de recherche en télématique. La Division des sciences de l'information a répondu favorablement à plusieurs demandes pour accroître les compétences dans ce domaine. Entre autres, la Division a installé un spécialiste de la télématique au bureau régional du CRDI à Nairobi afin d'être mieux équipée pour répondre aux besoins régionaux.

Les réseaux

Un grand nombre de projets de réseaux créés pour promouvoir le partage de l'information et des technologies de l'information ont déjà été soutenus par la Division. Par exemple, on a démarré la troisième phase du Réseau sahélien d'information et de documentation scientifique et technique. Ce réseau devrait permettre la participation des pays ne disposant que d'infrastructures rudimentaires. Au

s'autofinanciant. Au Pérou, des chercheurs recevront des fonds du CRDI afin de mener à bien leur projet d'extraction du latin des laras, gousses de certaines essences forestières. La réussite de cette recherche permettrait de créer de nombreux emplois dans une nouvelle industrie chimique tout en devenant une source de revenus additionnelle pour les agriculteurs. Par ailleurs, à Sri Lanka, des scientifiques du Computer and Information Technology Council, en collaboration avec la National University of Singapore et la société canadienne SCADA, s'engageront à perfectionner un système expert peu coûteux qui améliorera le séchage des feuilles de thé, permettant aux petits producteurs d'obtenir un meilleur rendement.

Enfin, la recherche conjointe du Department of Geological Survey and Mines de l'Ouganda et de l'Université de Toronto au Canada sur l'utilisation des pouzzolanes (matériaux susceptibles de remplacer le ciment) dans le cadre de projets communautaires de construction de logements peu coûteux constitue un excellent exemple des activités appuyées par le Programme Bâtiments : matériaux et technologies.

Sciences de l'information 57 projets, 10,8 millions de dollars

Au cours de l'année budgétaire 1988-1989, la Division des sciences de l'information a continué à mettre l'accent sur trois objectifs principaux : renforcer dans les pays en développement les capacités locales de gestion et d'utilisation efficaces de l'information; améliorer les systèmes, les services et les outils favorisant la gestion et l'utilisation de l'information sur la recherche pour le développement et le changement; et favoriser la coopération et la coordination de la recherche sur le développement grâce à l'échange d'informations. La Division s'acquitte de ces tâches en appuyant des projets concrets portant sur les problèmes d'information spécifiques aux pays en développement. La Division encourage aussi la coopération régionale et contribue à la formation du personnel afin de renforcer les réseaux déjà en place.

Une stratégie pour l'Afrique

L'an dernier, la Division a tout particulièrement dirigé ses efforts sur l'amélioration de la gestion de l'information en Afrique. Une stratégie a été élaborée afin de servir de cadre de référence pour s'assurer que lors de la sélection et de l'évaluation des projets, les priorités propres à l'Afrique soient respectées.

Dans le cadre du sous-programme Eau dans

l'environnement, un réseau régional d'hydro-

géologie urbaine a été institué en Amérique latine

pour renforcer les connaissances déjà acquises dans

ce domaine tout en permettant une meilleure

diffusion et application des résultats. Les membres

actuels du réseau sont des institutions localisées en

Argentine, en Bolivie, au Brésil, au Mexique, au

Nicaragua et en Uruguay. En plus des quatre projets

en cours, quatre nouveaux projets se sont greffés à

ce réseau pour l'étude des problèmes d'approvisi-

nement en eau des grandes villes latino-américaines

dont La Plata (Argentine), Cochabamba (Bolivie),

São Paulo (Brésil) et Managua (Nicaragua). Le

réseau regroupera plusieurs institutions de

recherche dont l'Universidade de São Paulo au

Brésil, et l'Instituto de Geofísica de l'Universidad

Nacional Autónoma de México. Il bénéficiera

également de la collaboration de l'Université de

Waterloo (Canada).

Les projets d'hydrogéologie en Afrique sont

très diversifiés. Un projet de l'Université nationale

de Côte d'Ivoire vise l'évaluation des ressources en

eau souterraine du bassin de la Marahoué. Il s'agit

d'une étude géologique et hydrogéologique qui sera

enrichie des données de la télédétection et par la

mise au point d'un système d'information à

référence spatiale, grâce à la collaboration de

l'Université de Sherbrooke (Canada). Deux projets

de l'Université de Dakar traitent des problèmes

d'ensablement des puits et de l'érosion des sols au

Sénégal et un autre projet de l'Ecole nationale

d'ingénieurs de Bamako, en collaboration avec

l'Institut national de la recherche scientifique de

Québec, devrait permettre de mieux comprendre la

problématique de la contamination des eaux

souterraines à Bamako, au Mali.

Dans un environnement complètement

différent, les recherches largement prometteuses et

sous certains aspects fructueuses sur la fonte des

neiges et des glaces dans les montagnes du nord du

Pakistan, débutées en 1983, ont contribué à

l'élaboration d'un second projet de plus de

4 millions CAD échelonné sur une période de cinq

années et entièrement subventionné par l'Agence

canadienne de développement international. Le

projet sera effectué en collaboration avec la British

Columbia Hydro International Ltd et la Water and

Power Development Authority du Pakistan. À la fin

des cinq ans proposés, le Pakistan aura un

équipement à la fine pointe de la technologie et un

personnel hautement qualifié pour assurer une

gestion optimum des eaux des grands réservoirs du

système hydrographique de la vallée de l'Indus.

Les activités incluses dans le sous-programme

géotechnique comprennent l'élaboration d'un plan

directeur d'aménagement de la ville de Conakry,

capitale de la Guinée, à l'aide des résultats d'une

cartographie géotechnique effectuée en

collaboration avec l'Université Laval au Canada,

l'étude des conditions de stabilité des digues de

même que la définition de normes appropriées pour

la construction de bâtiments sécuritaires dans des

régions sismiquement très actives de la Chine. Les

partenaires canadiens impliqués dans les projets de

la Chine sont les universités de l'Alberta, de la

Colombie-Britannique et le Conseil national de

recherches du Canada.

Une jeune science, l'agrogéologie, associant

l'agronomie et la géologie, est le trait commun de

trois projets en Colombie et en Ethiopie. Des

chercheurs de la Colombie ont entrepris de trouver

des méthodes artisanales et efficaces pour

transformer en engrais des minerais de phosphate

naturel. Cette recherche est une initiative de la

FOSSACOL, une petite entreprise privée

spécialisée dans l'extraction et la transformation

des phosphates. En Ethiopie, un premier groupe de

chercheurs tentera de transformer les phosphates

ignés en engrais tandis qu'un autre évaluera

comment les pailis de roches phosphatées peuvent

améliorer les rendements des récoltes. Ces deux

derniers projets seront effectués en collaboration

avec l'Université de Guelph au Canada et, s'ils

réussissent, offriront de nouvelles possibilités

d'emplois.

Une aide aux «petits mineurs» a été apportée

suite à l'approbation d'une recherche sur les

méthodes de prospection des gisements de pierres

précieuses et semi-précieuses à Sri Lanka. Les

chercheurs de l'Université Laurentienne de

Sudbury (Canada) et de l'Institut of Fundamental

Studies, situé à Kandy (Sri Lanka), contribueront à

déterminer des méthodes simples et efficaces

basées sur des principes scientifiques rigoureux

pour la recherche de nouveaux gisements.

De son côté, le Programme Technologie au

service des entreprises locales a financé deux

réseaux de projets de recherche en Amérique latine.

Le premier réseau coordonne les travaux de six

projets en cours sur les techniques de la fonderie.

L'autre réseau jouera le même rôle dans le domaine

de l'industrie chimique. Encore dans le secteur de

la fonderie, le CRDI a accepté de financer la

création d'une unité d'amélioration des rendements

et des techniques au sein de l'Organisation pour le

développement des petites industries de Turquie.

Cette organisation pourra dorénavant offrir aux

entreprises des conseils utiles pour améliorer les

produits et en garantir la qualité tout en

interrelations. On s'intéresse aux priorités et besoins sanitaires tels qu'identifiés par les collectivités, de même qu'à la mise au point de technologies conçues pour préserver et améliorer la santé des défavorisés. Le Programme continue aussi d'encourager des discussions et des recherches sur l'eau et son utilisation afin d'amener une meilleure connaissance des facteurs environnementaux influençant la santé, tout en accordant la priorité à l'accès à une eau potable et à l'analyse de la qualité de l'eau.

Le Programme continue d'appuyer le perfectionnement de techniques qui constituaient par le passé une des plus importantes contributions de la Division des sciences de la santé au développement du Tiers-Monde. Par contre, tel que décrit précédemment, plusieurs projets portent sur des programmes durables basés sur la mobilisation de la collectivité dans la lutte contre les maladies. Plusieurs projets en ce sens, sur le traitement des déchets solides et l'utilisation d'insecticides végétaux, ont été appuyés en Colombie, au Népal et au Pérou. Une recherche sur la lutte contre la bilharziose a été approuvée, au Zimbabwe.

L'invention et la diffusion d'appareils ont été au coeur de ce Programme, dont une recherche sur la mise au point d'un bélier hydraulique efficace et pratique à l'Université Malaya, cette université étant par ailleurs responsable de tout un réseau de projets sur des pompes à eau manuelles. De plus, on a financé le développement de trousses de diagnostic efficaces et bon marché pour des maladies aussi diverses que le SIDA et la dengue. Ces trousses devraient aider les collectivités à repérer rapidement des cas de ces maladies.

Enfin, la Division finance, conjointement avec la Division des sciences sociales, une recherche sur les problèmes de santé des agriculteurs utilisant des pesticides. Les administrateurs du Programme Santé et environnement prêtent une oreille favorable à tous les projets susceptibles de renforcer les institutions bénéficiaires. Un bon exemple est une enquête sur les empoisonnements attribuables aux pesticides, dans trois pays d'Afrique de l'Est, pour laquelle l'Institut des maladies industrielles de Finlande formera les enquêteurs.

Sciences de la terre et du génie
36 projets, 9,4 millions de dollars

La Division des sciences de la terre et du génie, nouveau nom de la Division des programmes de coopération depuis deux ans, s'est donné trois grands objectifs : développer la capacité de recherche des institutions du Tiers-Monde, faciliter

Les sciences de la terre

Démarrées en 1983, les sciences de la terre constituent le premier domaine de spécialisation de la Division. On y retrouve trois sous-programmes : l'hydrogéologie et l'hydrologie, la géotechnique et le petit secteur minier qui comprend l'agrogéologie. Dans le cadre des deux premiers sous-programmes, les techniques du génie sont utilisées pour des recherches sur des problèmes environnementaux de nature géologique, tremblements de terre et volcans; des problèmes d'érosion des sols et d'instabilité des pentes; et des problèmes d'approvisionnement en eau et de salubrité de l'eau. Des recherches sur la mise au point de méthodes plus appropriées d'extraction et de mise en valeur des ressources naturelles locales sont financées par le troisième sous-programme.

Les technologies utiles aux entreprises locales

Maintenant dans sa quatrième année d'opération, ce Programme met l'accent sur trois domaines : le génie métallurgique et le génie «léger», les textiles et le cuir, et les produits chimiques industriels. L'objectif principal est la valorisation des matériaux et des ressources naturelles locales de même que l'amélioration des techniques traditionnelles fortement utilisées de main-d'oeuvre.

Le bâtiment, les matériaux et les techniques

Le Programme de recherche sur les matériaux et les techniques du bâtiment, débuté en 1987, a été conçu pour aider les sans-abri à bénéficier d'un logement. Les projets appuyés ont pour objectif la mise au point de techniques et de matériaux spécifiquement conçus pour utilisation dans les programmes de construction communautaires, afin de mettre des logements adéquats à la portée des populations démunies des pays en développement. La priorité va aux petites et moyennes entreprises de fabrication de matériaux de construction et aux techniques d'utilisation des matériaux dans la construction de maisons à prix modiques.

Les activités des programmes

En 1988-1989, la Division a financé des projets dans tous ces programmes.

toute particulière aux types d'organisations communautaires qui peuvent participer à la définition des besoins et des priorités sanitaires ainsi que des modes d'intervention appropriés pour répondre à ces besoins.

Au cours des quatre prochaines années, le Programme Santé et collectivité continuera à développer d'autres axes de recherche en collaboration avec les autres programmes de la Division, les autres divisions du CRDI et des partenaires de l'extérieur. Ces nouveaux thèmes de recherche porteront sur l'éducation sanitaire, les stratégies de promotion de bonnes habitudes alimentaires, la participation des communautés dans les actions sanitaires, les méthodes susceptibles de favoriser la recherche participative, la diffusion et l'utilisation de nouvelles techniques, et l'étude des aspects environnementaux et comportementaux dans la transmission des maladies contagieuses. On renforcera aussi les réseaux de recherche et l'on favorisera la mise au point et la diffusion de nouvelles méthodes.

L'an dernier, le Programme a accepté de financer une vaste gamme d'activités dont plusieurs recherches interdisciplinaires, entre autres, sur l'amélioration des taudis en Indonésie et l'auto-médication des populations urbaines pauvres au Pérou, projets qui situent la collectivité au centre des efforts d'amélioration de la santé. Deux autres projets mettent l'accent sur l'état nutritionnel des femmes et des enfants : le premier porte sur les programmes de distribution de suppléments de fer, en Thaïlande; le second sur la nutrition des mères chez les familles paysannes ne participant pas aux circuits économiques du Malawi. Le Programme finance aussi une étude des pratiques sexuelles et des risques reliés au SIDA, au Sénégal, ainsi qu'une enquête sur l'utilisation et l'acceptabilité du condom au Nigéria; deux projets qui portent sur le rôle de la société et du comportement dans la propagation des maladies transmissibles sexuellement. Enfin, la Division continue de faire de la recherche en éducation sanitaire une priorité. Un projet d'éducation et de formation en nutrition, aux Philippines, et un autre sur les messages de promotion de l'hygiène en milieu rural, au Népal, consistent tous les deux en la mise au point et l'évaluation de matériel d'éducation sanitaire adapté aux contextes socio-culturels.

Les systèmes de santé

Le Programme des Systèmes de santé fait le lien entre la collectivité et ses besoins sanitaires, d'une part, et le système des soins de santé et les services disponibles ou nécessaires, d'autre part.

Ces systèmes comprennent aussi bien les ministères de la santé, les établissements de soins tertiaires, les dispensaires et les services traditionnels dans les villages. Le Programme inclut des recherches sur les fournisseurs de soins appropriés, leur programme de formation, ainsi que sur l'infrastructure dont ils ont besoin pour dispenser les soins et gérer les systèmes de soins. Il comporte quatre grands thèmes : la gestion et la prestation des services de santé, la planification des services de santé, les politiques sanitaires et le renforcement de la capacité de recherche des institutions locales.

Un projet de recherche sur la gestion et l'administration de la santé dans plusieurs pays d'Afrique de l'Ouest recouvre tous ces thèmes. Réalisé en collaboration avec l'Université de Montréal, ce projet apportera un appui institutionnel important au Centre africain d'études en gestion et administration afin d'aider au développement de programmes de gestion et d'administration en santé pour plusieurs pays francophones d'Afrique de l'Ouest.

Plusieurs projets sont des tentatives de créer des liens entre les départements de sciences de la santé des universités et les ministères de la santé et les organisations communautaires qui participent à la conception de politiques et de services de soins de santé primaires. Le projet en soins de santé primaires de l'Université du Bénin, mentionné plus haut, et une recherche sur la participation des collectivités à la promotion de la santé de l'Université du Canal de Suez sont deux exemples de ces efforts de rapprochement.

La détermination de méthodes d'évaluation du statut sanitaire et la création de systèmes de prévision des besoins sanitaires font l'objet de deux autres recherches au Mexique, sur des collectivités sentinelles utilisées pour mesurer l'impact des services de soins de santé, et sur les méthodes de diagnostic intégré à l'échelle d'un district au Kenya. L'on s'attend à ce que ces projets spécialement conçus afin d'évaluer les diverses méthodes de financement des services de soins ainsi que leur efficacité constitueront une proportion croissante des actions du Programme.

La santé et l'environnement

Le Programme comprend la recherche sur les facteurs physiques et biologiques de l'environnement qui affectent la santé des démunis. De plus en plus, le Programme met l'accent sur une approche intégrée de la recherche en santé. Ainsi, on appuie des recherches multidisciplinaires qui tiennent compte de nombreux facteurs et

de spécialistes de l'économie des pêches en Asie. Partout dans le monde, le savoir-faire de haut niveau dans ce domaine est rare, et l'Asie du Sud-Est a grandement besoin de tels spécialistes car, en ce qui concerne la pêche en milieu naturel, elle éprouve de graves problèmes qui menacent la survie de millions de personnes.

On trouve un exemple d'affection stratégique dans le travail qu'effectue un conseiller économique en foresterie, par le biais du Réseau de recherche sur la foresterie subventionné par le Centre en Asie du Sud et du Sud-Est.

Enfin, pour ce qui est des efforts de collaboration, précisons que la méthodologie innovatrice employée pour l'étude du système kényan de production d'huile et de protéines végétales (déjà mentionnée dans la section sur les systèmes de postproduction) fait appel à une interaction très poussée de la part de plusieurs universités, ministères et organismes privés et qu'elle s'est avérée une réussite. L'objectif global du projet est de répondre à la demande croissante d'huile végétale pour la consommation humaine et de protéines pour l'alimentation animale et ce, d'une manière qui soit techniquement et économiquement faisable pour le Kenya.

L'organisation des programmes de recherche de la Division des sciences de la santé s'appuie sur un modèle global et complet de l'environnement sanitaire. Le modèle tient compte de tous les éléments susceptibles d'influencer la santé des membres de la collectivité. La Division a regroupé en trois catégories ces éléments, causes de bien-être ou de maladies. Les programmes de recherche : Santé et collectivité, Systèmes de santé, et Santé et environnement, recouvrent ces trois catégories.

Les individus et les communautés constituent le principal objet des programmes qui sont interdépendants et constituent un continuum allant de la recherche sur la santé communautaire, telle que perçue par les membres de la collectivité, à la recherche sur des problèmes identifiés par des spécialistes.

Un programme spécial d'Appui intégré aux institutions de recherche recoupe les trois programmes de recherche de la Division. D'ici 1993, jusqu'à 30 % des fonds des Sciences de la santé pour des activités réalisées par la Division ou en collaboration avec d'autres divisions devraient financer des projets d'Appui intégré aux institutions de recherche. L'objectif principal de ce programme

Sciences de la santé 81 projets, 15,1 millions de dollars

est de renforcer les capacités de recherche des institutions de santé du Tiers-Monde de façon à ce qu'elles mettent au point des systèmes de soins communautaires efficaces, équitables et durables.

Le projet Aide institutionnelle — Pahu, au Bénin, est un exemple parfait de ce type d'activité. La Faculté des sciences de la santé de l'Université du Bénin, maître d'œuvre du projet, pourra créer un Centre de recherche et de formation en santé publique qui utilisera une approche multidisciplinaire dans l'étude de tous les aspects de la santé communautaire.

Le Centre effectuera des recherches sur tous les aspects des soins de santé primaires communautaires : les modes de financement, la prévention, l'éducation du public et le suivi. Le Centre formera aussi des agents de la santé pour le Bénin et d'autres pays africains, tout en assumant la responsabilité des soins de santé pour le district Ouidah, au Bénin, et conseillant le ministère de la Santé. S'il réussit, ce Centre deviendra un modèle et un catalyseur pour d'autres pays africains.

Le Programme d'Appui intégré aux institutions de recherche garantira une stabilité financière à l'équipe de Pahu et contribuera à la formation du personnel et à l'expansion des activités de recherches.

Santé et collectivité

Le Programme Santé et collectivité identifie et appuie des recherches insérées dans les communautés et orientées vers l'action. La priorité est accordée aux projets qui examinent comment les comportements humains et les conditions socio-économiques déterminent l'état sanitaire. Les projets sont complétés par d'autres activités qui ont pour but d'analyser les stratégies propres à améliorer la santé des individus, des familles et des collectivités en les faisant participer au choix et à la mise en œuvre des solutions.

Le Programme soutient des recherches sur les facteurs sociaux, culturels et économiques qui influent sur l'acceptation ou le rejet, par la collectivité, des informations sur ses comportements susceptibles d'améliorer, de maintenir ou de nuire à la santé de ses membres. Il accorde aussi de l'importance aux recherches sur les moyens efficaces de diffuser l'information et d'introduire des techniques ayant un impact sur la santé des collectivités, de même que sur les moyens encourageant les collectivités à utiliser correctement et systématiquement les informations et à utiliser et entretenir correctement des techniques nouvelles. On porte aussi une attention

En Asie, la mise au point des techniques aquicoles, en particulier des aspects qui touchent la nutrition et la santé des poissons ainsi que la génétique aquicole, demeure le champ d'action principal.

Systèmes de postproduction

Les grands objectifs du Programme des systèmes de postproduction sont d'améliorer la qualité des aliments des populations rurales et urbaines pauvres, d'en accroître la disponibilité, d'augmenter les possibilités d'emploi et de revenu par le biais de petites entreprises de transformation et de commercialisation des produits agricoles. À cette fin, le Programme appuie des travaux de recherche sur de nombreux aspects des systèmes de postproduction d'importantes denrées alimentaires de base. Il regroupe une vaste gamme de disciplines, notamment la mise en marché et l'économie, l'ingénierie, l'entomologie, la science et la technologie alimentaires, la biochimie et la nutrition.

Le Programme comprend trois sous-

programmes : transformation, utilisation des aliments et aspects nutritionnels; manutention, entreposage et séchage des aliments; et conception, adaptation et expérimentation du matériel agricole. Les activités du troisième sous-programme visent à satisfaire les exigences techniques permettant d'assurer un fonctionnement efficace des deux premiers. On favorise l'exécution d'études visant à cerner les problèmes et à définir la recherche avant d'accorder un appui à des projets d'envergure portant sur la mise au point de technologies. Ces études sont en général de nature interdisciplinaire et sont souvent subventionnées conjointement avec d'autres programmes.

L'un de ces projets (subventionné

conjointement avec le Programme de l'économie agricole) est mené en Afrique de l'Ouest et analyse les avantages socio-économiques des nouvelles technologies dans la région. C'est en tenant compte des répercussions socio-économiques éventuelles que l'on peut faire des choix technologiques pertinents. Ce projet, qui est effectué au Centre régional africain de technologie (Sénégal), incite également les jeunes chercheurs en sciences sociales et les technologues à développer une telle capacité de recherche au sein de leurs institutions. Deux projets dignes de mention, portant sur les aliments andins et la transformation des aliments, sont effectués avec la participation de trois universités régionales du sud du Pérou et l'Université de l'Alberta, au Canada. Reliés à des travaux précédents sur les systèmes de production

Economie agricole

Le Programme de l'économie agricole a pour objet d'améliorer la façon dont les facteurs économiques sont pris en considération dans la conception et l'introduction de nouvelles technologies. On peut prendre des décisions plus judicieuses quant aux technologies qui sont appropriées pour une région si l'on examine leurs éventuelles répercussions socio-économiques. De façon plus particulière, le Programme a appuyé des travaux de recherche visant à rendre plus efficaces la production, la distribution et la transformation des aliments. En collaboration avec d'autres programmes, il a tenté d'axer la recherche sur les aliments utilisés par les groupes les plus pauvres. Il a en outre mis l'accent sur les systèmes de production qui sont susceptibles de créer le plus de revenus et d'emplois.

Il existe plusieurs manières de mieux intégrer les considérations économiques à la recherche et au développement de nouvelles techniques : la recherche dirigée, l'éducation, l'affectation d'économistes et les projets menés en collaboration avec d'autres programmes et d'autres divisions.

Dans la première catégorie, plusieurs méthodes sont actuellement mises à l'essai au Chili dans le cadre de la recherche sur les systèmes d'exploitation agricole. Les chercheurs espèrent accroître le revenu des agriculteurs par l'élaboration et la mise à l'essai de techniques améliorées, conçues pour venir à bout des conditions d'exploitation auxquelles font face les agriculteurs.

On trouve un bon exemple d'éducation dans un projet qui réunit des chercheurs affiliés au Réseau des sciences sociales sur les pêches en Asie et un expert-conseil de l'Institut of Fisheries Analysis de l'Université Simon Fraser du Canada, et qui a pour objet de constituer une masse critique

d'augmenter les revenus tirés des produits de la forêt.

Ces priorités ont été définies dans le cadre de l'objectif que s'est donné la Division d'accroître l'accès à la nourriture. Il est évident que les

activités de ce Programme ne peuvent guère avoir pour but de fournir directement de la nourriture. Cependant, par son appui aux recherches effectuées sur les systèmes de production intégrée et sur l'approvisionnement en énergie, il contribue à cet objectif global de la Division. De même, par l'aide qu'il apporte dans d'autres domaines de recherche, en ce qui concerne le bambou et le rotin, par exemple, le Programme favorise la création de revenus et l'augmentation du pouvoir d'achat.

Il y a lieu de mentionner certaines initiatives qui ont vu le jour au cours de l'année. Ainsi, on a davantage mis l'accent sur la conservation et l'évaluation des ressources génétiques naturelles, et des projets ont été subventionnés dans toutes les régions, notamment au Congo et au Mali (espèces indigènes), en Malaisie et en Papouasie-Nouvelle-Guinée (rotin), en Argentine, au Costa Rica et au Pérou (les espèces *Prosopis* et *Inga*). En outre, une deuxième subvention a été accordée au Centre régional d'approvisionnement en graines du Zimbabwe, qui connaît beaucoup de succès.

L'agroforesterie est demeurée le domaine prioritaire, auquel un peu plus de 50 % des affectations du programme ont été consacrées. Là encore, l'aide à la recherche a été accordée dans toutes les régions, notamment pour un projet de sylvipâturage, en Inde, qui a pour but d'accroître la productivité et la viabilité des terres incultes du centre du pays au moyen d'arbres qui peuvent fixer l'azote et produire du fourrage. Dans le cadre d'un projet mené au Kenya, des chercheurs locaux collaborent avec l'Université de Toronto à la mise au point de techniques de conservation des sols qui tiennent compte des modes traditionnels d'utilisation des terres et des facteurs socio-économiques.

Enfin, il importe de mentionner l'activité accrue du Programme au Moyen-Orient, une région qui n'a pas reçu autant d'aide que les autres dans le passé. Les projets les plus importants cette année ont porté sur la culture des arbres forestiers, en Egypte, et sur les brise-vent, en Tunisie. On compte élever encore les programmes dans la région au cours de l'année qui vient.

Pêches

Les deux principaux objectifs du Programme des pêches sont d'accroître la disponibilité des

espèces aquatiques pour consommation par les populations locales et d'améliorer le revenu des collectivités rurales et côtières vivant de la pêche artisanale. Le Programme se divise en deux sous-programmes : aquaculture (eau douce et eau salée) et pêches artisanales. Le sous-programme de l'aquaculture encourage la recherche permettant de satisfaire aux exigences scientifiques et techniques des systèmes de production, principalement en Asie et, dans une moindre mesure, en Afrique. Quant au sous-programme des pêches artisanales, il cherche à promouvoir le développement intégré des collectivités côtières, principalement en Amérique latine.

Durant l'année, le Programme des pêches a continué de mettre l'accent sur une approche intégrée de la production des espèces aquatiques par les collectivités rurales et côtières, et en particulier sur la production d'espèces pour consommation locale. La situation en Amérique latine illustre bien la nécessité d'une telle approche. En effet, la consommation de poisson y est faible, soit en moyenne de 5 kilogrammes par personne par année, et ce, même si la production de poisson dans la région représente plus de 15 % de l'ensemble de la production. L'un des principaux défis que doit relever le Programme consiste à promouvoir une consommation accrue, par la population locale, du poisson qu'elle produit et ce, dans le but d'améliorer son état nutritionnel.

En 1988-1989, le Programme des pêches a élaboré sept projets dans le domaine des pêches artisanales destinés surtout à la consommation locale. Les projets *Réseau des pêches artisanales (Chili)*, *Pêches artisanales (Colombie)* et *Pêches artisanales (Pérou)* sont trois projets intégrés dans le cadre desquels on appuie la recherche appliquée sur la disponibilité des ressources, la mariculture, le transport des prises, les techniques de transformation et l'amélioration des conditions socio-économiques des collectivités côtières, au moyen d'une approche multidisciplinaire faisant appel à d'autres divisions et programmes du CRDI.

Trois autres projets — au Brésil sur le thon, au Chili sur les exploitations maricoles et en Ouganda sur la productivité des lacs — ont pour but d'accroître le rendement des produits de la pêche destinés à la consommation locale. Dans le cadre d'un autre projet mené en Amérique latine et subventionné conjointement avec la Division des communications, on mettra à l'essai et on évaluera l'utilisation de matériel audiovisuel dans la vulgarisation des techniques de mariculture et de transformation du poisson auprès des collectivités côtières.

Systèmes de production végétale

Le Programme des systèmes de production végétale vise une productivité agricole durable et stable tout en cherchant à maintenir et même à améliorer la qualité de l'environnement. La recherche sur les systèmes et leurs composantes, souvent effectuée en collaboration avec d'autres programmes et divisions du CRDI, est à la base de la stratégie du Programme des systèmes de production végétale. On y met l'accent sur des activités de recherche participatives sur la ferme, appliquées et multidisciplinaires, mais on accorde cependant de plus en plus d'attention à des

initiatives de recherche à caractère plus fondamental (en biotechnologie, notamment). On reconnaît la nécessité de créer et d'entretenir des liens solides entre les programmes nationaux, les centres régionaux et internationaux et d'autres institutions pertinentes dans le domaine de la recherche et du développement (les organisations non gouvernementales, par exemple), et on favorise l'établissement de tels liens.

L'appui accordé au Réseau de recherche sur les cultures oléagineuses en Asie et en Afrique

constitue une initiative d'envergure du Programme. Les activités de recherche du Réseau ont contribué à la mise au point de cultures oléagineuses à rendement plus élevé et résistant aux maladies. De plus, les pays dont les programmes nationaux sont plus faibles reçoivent l'aide des pays plus avancés grâce à des séances de formation, à des visites et à l'échange de l'information. Récemment, la Chine a manifesté un vif intérêt à l'égard de ce Réseau et des délégués chinois ont pris part à plusieurs réunions et offert d'échanger, de façon réciproque, de l'information et du matériel génétique amélioré.

Le Centre subventionne également le Réseau de culture en couloirs pour l'Afrique tropicale, qui contribuera à l'établissement de systèmes de production durable (tout en améliorant la production végétale et animale) pour les tropiques humides et semi-humides. Ce projet est soutenu à la fois par le Programme de foresterie et le Programme des systèmes de production végétale (on verra d'ailleurs de plus en plus ce genre de collaboration) et il est subventionné conjointement par l'Agence canadienne de développement international et le CRDI.

En Asie du Sud-Est, on met davantage l'accent sur les questions liées à la durabilité des systèmes proposés aux agriculteurs, comme en témoignent deux projets. Le premier, mené à l'Université des Philippines, a pour objet d'instaurer une collaboration entre agriculteurs et scientifiques aux fins de recueillir, de conserver, d'échanger,

d'évaluer et de sélectionner des cultivars de riz qui conviennent à la région. Quant au second, il s'agit du *Sustainable Agriculture Newsletter* (Malaisie), une publication permanente à l'intention des nombreux particuliers et organismes qui s'intéressent à ce sujet. Ce bulletin est subventionné conjointement par le CRDI et le CUSO (anciennement, le Canadian University Service Overseas), et quatre numéros ont été publiés à ce jour.

Les recherches effectuées dans le cadre d'un autre sous-programme portent sur les cultures annuelles, les cultures pérennes, les systèmes culturaux et la lutte phytosanitaire intégrée. Parmi les projets sur les cultures annuelles qui ont été subventionnés durant l'année, mentionnons le projet sur la production de semences potagères en Thaïlande, qui reconnaît l'importance des légumes sur le plan nutritionnel de même que les grandes possibilités qu'ils offrent pour la création d'emplois et de revenus dans les petites exploitations agricoles. On devrait vraisemblablement augmenter à l'avenir les affectations consacrées à la recherche sur les légumes. En Afrique, dans le cadre d'un projet des plus intéressants, on tente d'utiliser de nouveaux outils technologiques pour aider les sélectionneurs africains à lutter contre les maladies vitales qui s'attaquent aux principales cultures vivrières. Cette recherche sur les anticorps monoclonaux s'effectue en collaboration avec l'Institut international d'agriculture tropicale (Nigéria) et Agriculture Canada.

Les activités de recherche sur les cultures pérennes ont été axées sur la banane et la banane plantain. Un projet pour aider le gouvernement de l'Ouganda à mettre sur pied un programme national de recherche sur la banane a été subventionné en collaboration avec la Rockefeller Foundation. Dans le domaine de la lutte phytosanitaire intégrée, des travaux de recherche ont été entrepris sur la lutte contre les lépidoptères au moyen du *Bacillus thuringiensis*; c'est là un champ de recherche fort prometteur que l'on compte explorer plus à fond.

Foresterie

L'objectif du Programme de foresterie consiste à accroître l'offre et la disponibilité de produits forestiers pour les pauvres des pays en développement. À cette fin, le Programme appuie des travaux de recherche appliquée ayant pour but de favoriser les programmes de foresterie communautaire ou sociale, de mettre en place des systèmes dans le cadre desquels les arbres et les plantes ligneuses contribuent à une production alimentaire écologiquement saine et viable, et

Burundi. Dans le cadre de ces projets, des techniques très prometteuses sont mises au point pour améliorer la productivité des pâturages, ce qui devrait permettre d'accroître considérablement la production laitière et la productivité des petites exploitations agricoles.

Des progrès ont été effectués en matière d'alimentation, de gestion et de santé du bétail, mais certains scientifiques aimeraient voir une amélioration des races elles-mêmes. Un nouveau projet mené au Vénézuéla vise l'amélioration génétique des races bovines pour la production de viande et de lait et l'élaboration d'une méthode d'évaluation à la ferme des résultats de la recherche. Il s'agit là d'une nouvelle orientation pour la Division et, lorsqu'elle sera au point, cette méthode pourra également servir dans le cadre d'autres projets menés en Amérique latine, ainsi qu'en Afrique et en Asie.

Les systèmes de production de petits ruminants continuent de bénéficier d'un appui important de la part du Centre. À cause de leur capacité de production en milieu difficile partout dans le monde et de leur grande prolificité, les moutons et les chèvres sont des animaux qui conviennent très bien aux petits exploitants agricoles. Le Centre subventionne un nouveau projet en Malaisie, qui tente d'intégrer l'élevage de moutons et de chèvres à des palméraires exploitées pour la production d'huile de palme. On a également renouvelé l'aide accordée à un autre projet qui a pour but d'améliorer la production des chèvres chez de petits exploitants agricoles. Ces dernières, grandement négligées par les institutions régionales de recherche et de développement, sont parmi les plus démunies du secteur rural.

Les systèmes d'alimentation animale demeurent un domaine prioritaire pour le Programme. En Amérique latine, un pourcentage important des agriculteurs habitent les hautes terres andes et, dans leurs systèmes d'exploitation agricole, la production animale repose sur les prairies naturelles, qui sont peu productives. On peut y apporter des améliorations considérables par l'adoption de meilleurs pâturages et de meilleures techniques de gestion des terrains de parcours. À cette fin, on a approuvé la création d'un réseau régional, qui a son siège au Chili. Le Centre a également renouvelé son appui à d'autres projets sur les pâturages dans plusieurs pays d'Afrique et en Equateur. Les bons résultats obtenus en amélioration des pâturages pour la production animale et des semences de fourrage dans le cadre de ces projets entraîneront peut-être une expansion des activités de ce genre dans d'autres régions.

Des projets intersectoriels en nutrition Benin et au Nigéria, et ces activités devraient entraîner la création d'un réseau de projets intégrés en nutrition pour l'Afrique occidentale. En collaboration avec l'Organisation mondiale de la santé, le CRDI organise une série d'ateliers visant à définir les problèmes auxquels devraient s'attaquer les chercheurs en nutrition d'Afrique de l'Ouest et d'Afrique de l'Est. L'on a en outre accru le dialogue avec le Fonds des Nations Unies pour l'enfance sur les questions liées à la nutrition en Afrique, en particulier celles qui touchent la survie des enfants et le développement de politiques rurales pertinentes.

Systèmes de production animale

Le Programme des systèmes de production animale a pour objectif d'aider les pauvres des pays en développement en augmentant l'offre et la disponibilité des produits d'origine animale. On compte y parvenir en appuyant des travaux de recherche qui ont pour objet d'accroître la production animale et la productivité des petites exploitations agricoles par le biais de trois sous-programmes : systèmes de production, systèmes d'alimentation et composantes des systèmes. Des améliorations dans ces domaines peuvent entraîner un revenu accru et un meilleur accès à la nourriture.

Dans les pays en développement, la consommation de protéines, en particulier de protéines de bonne qualité, est très faible. Les protéines consommées sont surtout d'origine végétale. Divers facteurs restreignent la production de protéines animales de bonne qualité (parmi lesquelles le lait, les oeufs, la viande et les abats) et, en raison de leur prix élevé, celles-ci ne sont pas à la portée d'une bonne partie de la population.

Le lait et les produits laitiers occupent une place importante dans l'alimentation, surtout chez les enfants. Cependant, la majorité des pays tropicaux n'en produisent pas suffisamment et, pour répondre à la demande, en importent en très grande quantité. En Amérique latine seulement, on évalue à plus de 500 millions USD les importations annuelles de lait et de produits laitiers.

Le Centre appuie bon nombre de projets qui ont pour but d'accroître la production intérieure de ces produits essentiels. On a renouvelé l'aide accordée à des projets portant sur des systèmes de production laitière au Chili et en Guyana. On a également renouvelé la subvention octroyée à un projet sur les systèmes de production du bétail au

admissibles. Les études, les stages et les recherches qu'ils se proposent d'entreprendre doivent être effectués dans un pays du Tiers-Monde et leur durée ne doit pas dépasser 12 mois. Le personnel des divisions du CRDI et celui de la Division des bourses choisissent ensemble les boursiers, dont la liste est présentée à la page 71.

Enfin, la Division offre la bourse John G. Bene en foresterie sociale, qui est administrée par le CRDI à même une dotation établie par la succession de feu John G. Bene, un ancien gouverneur du CRDI, et par des souscriptions publiques. Cette bourse est accordée à un étudiant qui poursuit des études supérieures en foresterie et dont les travaux de recherche portent sur la contribution de la foresterie au développement économique et social.

Sciences de l'agriculture, de l'alimentation et de la nutrition

116 projets, 29,8 millions de dollars

La Division des sciences de l'agriculture, de l'alimentation et de la nutrition (SAAN) a pour objectif d'accroître l'accès des individus à la nourriture et aux autres produits de première nécessité. Pour atteindre cet objectif, il faut élaborer des stratégies qui vont bien au-delà de la simple augmentation de la production alimentaire. Il faut des stratégies qui visent une répartition équitable des bénéfices tirés des activités agricoles et qui permettent d'augmenter le pouvoir d'achat des pauvres des régions rurales et urbaines. Et il faut de plus en plus créer des emplois au sein du système de production et d'utilisation des ressources naturelles renouvelables.

Le CRDI a réévalué récemment sa stratégie en matière de nutrition et augmente son appui dans ce domaine. Une section de nutrition, logée dans la Division des SAAN mais avec un mandat à l'échelle du Centre, a été créée en janvier 1989 pour coordonner et intégrer, par l'entremise d'un comité consultatif interdivisionnaire, les activités qui, dans toutes les divisions, sont liées à la nutrition.

L'intérêt qu'elle porte aux répercussions écologiques des systèmes de production agricole et la nécessité de promouvoir des modes d'exploitation durables ont amené la Division à accroître ses programmes dans ce domaine essentiel.

La structure des SAAN a été quelque peu modifiée cette année, le Programme des systèmes de production animale et végétale ayant été scindé en deux nouveaux programmes, à savoir le

Section de nutrition

La nouvelle Section de nutrition a pour mission générale de contribuer à l'amélioration de la nutrition dans les collectivités et, plus particulièrement, de hausser l'état nutritionnel des plus démunis. À cette fin, la Section appuie les travaux de recherche qui ont pour objet de promouvoir :

- l'élaboration et la mise en oeuvre de méthodes d'évaluation des grandes causes des problèmes de nutrition au niveau des collectivités;
 - la formulation de politiques et de programmes d'action nationaux pour l'amélioration de la nutrition; et
 - le financement des projets intégrés en nutrition, des recherches sur des méthodes innovatrices, et la diffusion d'informations pertinentes provenant de disciplines connexes.
- La Section a démarré en Asie du Sud et en Afrique, compte tenu des très graves problèmes de nutrition qui existent dans ces régions, mais des activités sont maintenant en plein essor en Amérique latine et en Asie du Sud-Est.

Parmi les activités qui ont été entreprises en Asie du Sud, mentionnons la création d'un groupe consultatif réunissant des spécialistes en nutrition de la région; des recherches visant à déterminer les répercussions de différents systèmes d'exploitation agricole sur l'état nutritionnel; des activités de recherche et de développement en vue d'améliorer l'utilisation des aliments et de créer des revenus dans les régions semi-arides de l'Inde; des études visant à améliorer l'état nutritionnel des jeunes femmes et des nourrissons; et des recherches menées au sein des collectivités pour mettre à l'essai et perfectionner des méthodes qui permettent de déterminer les problèmes d'ordre nutritionnel et leurs causes. Cette dernière activité a d'ailleurs donné lieu à une publication du CRDI qui énonce des lignes de conduite pour l'évaluation rapide des problèmes d'ordre nutritionnel et l'élaboration des interventions des chercheurs en nutrition dans les collectivités.

Il est urgent de se pencher sur les problèmes alimentaires très graves et fort étendus auxquels l'Afrique fait face. Pour obtenir une amélioration soutenue dans cette région, il faudra mieux assurer les bases du développement agricole et mettre un frein à la dégradation de l'environnement.

dans le cadre de projets, formation dans le cadre de programmes, formation en vue du renforcement des institutions, formation spécialisée et formation axée sur les carrières en développement (Canada).

Formation reliée aux projets et aux programmes et formation dans le cadre du renforcement des institutions

Ces trois premiers programmes témoignent du fait que l'accent se déplace graduellement et qu'une priorité plus grande est accordée au renforcement des institutions du Tiers-Monde. À cet égard, la Division a accordé un soutien considérable à l'éducation supérieure en Afrique orientale et australe. La Division continue d'appuyer et d'encourager les efforts visant à renforcer l'enseignement supérieur, par exemple, auprès de la University of the West Indies, dans les Antilles, de la Pontificia Universidad Javeriana, à Bogota, et du Réseau sur les ressources humaines en Amérique latine, qui étudie de façon approfondie la formation menant à l'obtention des diplômes universitaires.

Il y a une collaboration soutenue entre la Division des bourses et les autres divisions, surtout en ce qui concerne des projets qui sont d'avantage axés sur la recherche. Cette collaboration prend diverses formes — il peut s'agir du cofinancement de projets de formation ou de l'élaboration et de la coordination de programmes de formation financés par d'autres divisions. C'est le cas, par exemple, d'un projet en cours aux Philippines, le Programme intégré sur les plantes racines, qui est une entreprise d'envergure menée dans l'Etat de Visayas et la laquelle participent cinq divisions du CRDI et le bureau régional pour l'Asie et du Sud-Est. Les activités de mise au point de nouvelles variétés de plantes racines s'étendront à toute la gamme des activités de ce Programme, de la culture à la transformation et à la distribution. La Division des bourses contribuera à l'élaboration d'un programme de formation permanent au Philippines Root Crop Research and Training Centre. Si le projet réussit, ce Centre pourrait devenir le plus important institut spécialisé dans les plantes racines en Asie du Sud-Est.

Formation spécialisée

Dans le cadre du Programme de formation spécialisée, la Division continue d'accorder les

Bourses Pearson. Du nom de l'ancien premier ministre du Canada, Lester B. Pearson, qui fut président du Conseil des gouverneurs du CRDI de 1970 jusqu'à sa mort, en décembre 1972, ces bourses sont offertes à de jeunes fonctionnaires des pays en développement à l'emploi de leur gouvernement depuis au moins trois ans. Les candidats sont choisis par les missions canadiennes à l'étranger et les bureaux régionaux du CRDI. Les boursiers Pearson demeurent au Canada de 9 à 12 mois pour y suivre un programme sans crédits associant des cours universitaires à un stage au sein d'un ministère. Tous les boursiers Pearson prennent part à un programme d'études conçu spécialement à leur intention par la School of Public Administration de l'Université Carleton et la Faculté d'administration de l'Université d'Ottawa. La liste des 17 boursiers Pearson pour 1988-1989 se trouve à la page 69.

Formation axée sur les carrières en développement (Canada)

Le Centre a aussi autorisé la création d'un programme de stages dont le but est de donner des occasions d'apprentissage, grâce à des expériences pratiques, à des personnes oeuvrant au sein d'institutions qui bénéficient de l'aide du Centre partout dans le monde. Quinze stages sont offerts chaque année; ils doivent être effectués à Ottawa ou dans l'un des bureaux régionaux du CRDI. Les stagiaires relèvent des divers programmes du Centre et leur travail est supervisé par les directeurs associés des divisions.

Octroyées dans le cadre du Programme de formation axée sur les carrières en développement (Canada), les Bourses aux jeunes chercheurs (Canada) sont attribuées à des étudiants qui poursuivent des études de doctorat dans une université canadienne. Le but de ce programme est de leur faire prendre conscience des problèmes du Tiers-Monde et de favoriser leur engagement dans des domaines scientifiques où oeuvre le CRDI. Sont admissibles les candidats qui étudient au niveau du doctorat dans les domaines suivants : agriculture, sciences de l'alimentation, nutrition, communications, sciences de la terre et du génie, sciences sociales. Les étudiants de domaines de l'information et des communications, du journalisme, de la gestion et de l'administration financière, des sciences de la santé et des sciences de l'information. Les jeunes professionnels canadiens qui oeuvrent déjà dans les domaines des communications et du journalisme, de la gestion ou de l'administration financière sont aussi

le troisième projet, qui bénéficie aussi de l'apport du Bureau d'évaluation et de planification du CRDI, passera en revue neuf projets où la mise en marché de semences constituait le mode de diffusion des résultats. Cette recherche devrait indiquer les facteurs essentiels à la réussite d'une campagne de marketing de semences de variétés nouvelles, issues de la recherche.

Puisque l'objectif du Centre est d'appuyer des recherches axées sur les soucis quotidiens des populations défavorisées, il s'avère capital de connaître leurs problèmes. Une recherche du International Institute for Rural Reconstruction (Philippines), appuyée conjointement par les divisions des Communications et des Sciences de l'information, évaluera différentes stratégies de participation des communautés rurales à l'identification et à la solution de problèmes. Ces deux mêmes divisions du CRDI se sont aussi associées afin de financer un projet conjoint du Caribbean Industrial Research Institute (Trinité-et-Tobago) et du Centre de recherche industrielle du Québec pour mettre au point des stratégies de diffusion de l'information utile aux petites et moyennes entreprises des Antilles.

Publications

En 1988-1989, la Division des communications a publié 66 monographies, comptes rendus, ouvrages techniques et rapports portant sur les nombreux domaines de recherche subventionnés par les autres divisions du CRDI. À la page 68 de la section de langue anglaise de ce rapport annuel se trouve la liste des publications produites par le CRDI ou grâce à des subventions du Centre, au cours de l'année dernière. Les titres des ouvrages sont donnés dans la langue originale de publication. Un catalogue des publications est disponible sur demande.

Magazines

De plus, la Division administre au nom du CRDI plusieurs services d'information sur le développement destiné à divers publics, autant à l'étranger qu'au Canada. Une revue trimestrielle, *Le CRDI Explore*, ainsi que des films documentaires, constituent les éléments les plus importants de ces services. *Le CRDI Explore* présente les travaux de recherche financés par le CRDI et traite de sujets relatifs aux domaines d'intervention du Centre. Son tirage est d'environ 28 000 exemplaires — en incluant les éditions publiées en anglais (*The IDRC Reports*) et en espagnol (*El CIID Informa*) — dont plus de 64 % sont diffusés dans les pays en développement, 20 %

Les productions audiovisuelles

Deux productions vidéo ont été réalisées l'an dernier. Un documentaire d'une quinzaine de minutes, «La foresterie au Botswana», porte sur les activités de reboisement de l'Association forestière du Botswana. Quant à «La mécanique d'armures», ce vidéo de 15 minutes présente un mécanisme de l'inventeur pakistanais Wasey Omar qui met à la portée des petits artisans la possibilité de fabriquer des tissus de textures et de motifs très variés. Ce dispositif mécanique peut être installé sur les métiers à tisser des artisans tisserands et peut être fabriqué localement.

Ces documentaires sont disponibles selon les formats vidéo U-matic, VHS et Betamax, et selon les standards NTSC, PAL et SECAM. On peut obtenir un catalogue des documentaires audiovisuels en écrivant au CRDI.

Division des bourses

26 projets, 4,1 millions de dollars

La Division des bourses est un partenaire actif des divisions du Centre en ce qui concerne la formation et le perfectionnement des chercheurs, des administrateurs d'instituts de recherche et des gestionnaires de la recherche. Ses divers programmes répondent aux besoins de formation qui lui sont indiqués par les spécialistes des autres divisions du CRDI, en poste à Ottawa et dans les bureaux régionaux.

Le principal objectif de la Division est d'accroître les capacités de recherche des instituts du Tiers-Monde par la formation de leur personnel. La Division cherche à atteindre ses objectifs en offrant diverses catégories de bourses qui varient en nature et en nombre, selon les besoins perçus par le Centre. Les bourses sont attribuées principalement au personnel de recherche des pays les moins avancés pour leur perfectionnement professionnel plutôt que pour la formation de base. La formation s'effectue dans des instituts réputés qui sont situés, par ordre de priorité, dans le pays d'origine, dans la région, au Canada ou dans un autre pays industrialisé. Lorsque la formation a lieu à l'extérieur du pays d'origine, les conditions sont très strictes et le boursier du CRDI doit retourner par la suite dans son pays.

Les activités de la Division se répartissent entre les cinq programmes suivants : formation

Activités des divisions

Communications

9 projets, 1,3 million de dollars

Au cours de l'année budgétaire 1988-1989, la

Division des communications a approuvé un

nombre sans précédent de projets. La grande

majorité de ces projets s'inscrivent dans un effort

accru de valorisation des résultats de plus en plus

nombreux provenant des recherches financées par

le CRDI. L'augmentation des projets dans les pays

en développement n'a pas empêché la Division de

poursuivre ses activités traditionnelles dans les

domaines de la traduction, de la diffusion et de la

production de documents audiovisuels et

d'imprimés, pour les besoins du CRDI et de ses

publics cibles, au Canada et à l'extérieur.

Par ailleurs, un sondage auprès de la

population canadienne commandé par la Division

des communications a confirmé l'intérêt des

Canadiens pour des informations sur les réalités des

pays en développement. Les Canadiens veulent

savoir comment la recherche contribue au

développement et quelles sont les solutions à long

terme envisagées pour résoudre les problèmes

majeurs. Cette enquête a permis de réorganiser le

Programme des affaires publiques de la Division,

en soulignant l'importance pour le Centre de

partager sa vaste expérience et ses connaissances.

La nouvelle stratégie des affaires publiques

permettra de mieux informer plusieurs publics

cibles d'importantes informations obtenus par

les scientifiques du Tiers-Monde avec l'appui du

CRDI

À court terme, la diffusion et l'utilisation des

résultats de recherche constitue l'objectif recherché,

mais la Division se préoccupe aussi de faire

avancer les connaissances théoriques sur les

conditions et les méthodes générales d'adoption de

techniques ou de politiques nouvelles. La Division

des communications s'est donc dotée d'un cadre

théorique à trois volets dans lequel s'inscrivent la

plupart des projets. Le premier volet comprend les

expériences innovatrices concrètes en diffusion et

utilisation des résultats de recherche. Le second

regroupe les études sur les mécanismes susceptibles

de favoriser la participation des communautés au

processus de recherche, de l'étape de la formulation

jusqu'à l'analyse des résultats en passant par la

réalisation des travaux eux-mêmes. Dans le

troisième volet se situent les recherches sur les

techniques et les systèmes de communication.

De très nombreux projets appuyés par le CRDI

ont atteint un stade où il importe maintenant

d'assurer la diffusion de leurs résultats. En Asie,

tout particulièrement, la Division des

communications prend la relève des autres

divisions du Centre lorsque le nouveau défi à relever, la

réalisation de projets, devient le nouveau défi à relever. Ainsi, la

National University of Singapore a reçu une

subvention afin de produire et mettre à l'essai des

manuels, des affiches, des dépliants et des vidéos

présentant un nouveau système d'analyse et de

mesure commandé par microordinateur auprès de

trois catégories de clients potentiels : les

enseignants, les chercheurs et les ingénieurs et

techniciens de l'industrie. Le système a été mis au

point dans le cadre d'une collaboration entre la

National University of Singapore et la firme

SCADA, de Toronto (Canada).

En Chine, le bambou joue une multitude de

fonctions. La production actuelle atteint près de

3 millions de tonnes de tiges par année et le CRDI a

appuyé plusieurs importantes recherches afin que

l'objectif de 11 millions de tonnes soit atteint d'ici

l'an 2000. Le Subtropical Forestry Research

Institute de Fuyang mettra au point une stratégie de

diffusion des nouvelles techniques de production et

des nouvelles variétés. Ce sera l'une des premières

fois qu'une campagne de vulgarisation technolo-

gique sera précédée d'une enquête sur les attitudes

et les méthodes des paysans producteurs de bambou.

Aux Philippines, la Capiz Development

Foundation a obtenu le soutien conjoint des

divisions des Sciences de la santé et des

Communications du CRDI et de l'Agence

canadienne de développement international pour la

diffusion d'un nouveau modèle de réservoir en

ferrociment, utilisé pour capter et emmagasiner

l'eau de pluie. Ce type de réservoir, qui peut être

construit par des villageois, a été mis au point aux

Philippines avec l'appui du CRDI.

La Division des communications est partenaire

de la Division des sciences de l'agriculture, de

l'alimentation et de la nutrition dans le cadre de

trois autres projets. Le premier permettra à des

spécialistes du département de biologie et de

technologie marines de la Universidad Católica du

Chili d'utiliser la vidéo pour diffuser de nouvelles

méthodes auprès des pêcheurs côtiers. Le second,

auquel participe un total de cinq divisions du CRDI,

a pour objectif de faire du Visayas State College of

Agriculture (Philippines) le centre d'excellence en

recherche sur les tubercules alimentaires (patate

douce, manioc et taro) pour l'Asie du Sud-Est. Ces

plantes revêtent une grande importance pour les

exploitants agricoles marginalisés et pauvres. Enfin,

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avec l'octroi du Parlement que reçoit le Centre, à faire contribuer la science à augmenter la production alimentaire, à améliorer la santé et la qualité de l'éducation, à construire des logements salubres, à élaborer des politiques sociales utilisables et à faire de la planification et de l'ajustement économiques durables.

La modeste des sommes investies — moins de 4 % du budget annuel canadien de l'aide publique au développement — ne se compare pas aux extraordinaires résultats obtenus et à l'incalculable apport à la réputation du Canada. Les réussites se trouvent dans la centaine de pays où les projets financés par le CRDI ont abouti à la solution de problèmes locaux; où les efforts soutenus se traduisent par des réalisations au plan de la dignité humaine, du bien-être social et du progrès économique que l'on a vues dans le Nord.

Ce type d'aide au développement a fait une telle impression sur la société internationale pour la promotion de la recherche scientifique, Sigma XI, que, l'année dernière, elle a offert au CRDI son premier prix du XXI^e siècle parce que, selon elle, le CRDI est, au monde, l'organisation qui «prépare le mieux la société au prochain siècle». De même, la réputation du CRDI est telle qu'il a été choisi pour participer à une étude du vérificateur général du Canada sur les caractéristiques des organisations performantes. Cette reconnaissance d'efficacité de la part du vérificateur général est équivalente à un Oscar en bonne gestion de la part du plus exigeant des examinateurs.

Dans la mesure des moyens financiers qui lui seront accordés, le CRDI poursuivra l'accomplissement de sa mission : appliquer la science à la promotion de l'avancement social et économique des régions en développement du monde, guidée par les habitants de ces régions et tout en accordant une attention spéciale aux groupes les plus pauvres. Et il le fera dans une perspective canadienne, conscient qu'il est que les Canadiens ont besoin des marchés d'exportation, ont besoin d'un environnement sain et ont besoin de la paix. Conscient aussi que faisant partie d'une société bonne, notre sens de la dignité personnelle exige le respect de la dignité humaine ailleurs.

régionaux lorsque les gouvernements détournent l'attention des échecs internes.

Notre planète et ses habitants ne pourront indéfiniment soutenir des comportements qui ont abouti à une population mondiale de 5,2 milliards (chiffre qui a doublé en 40 ans à peine), qui ont mis 1 milliard de personnes dans une condition telle que leur régime alimentaire les rend incapables au travail, qui entraînent la destruction des terres arables au rythme de 1 hectare toutes les 14 secondes, qui réduisent le niveau de vie dans la plupart des pays en développement, qui favorisent les transferts d'armes à des gouvernements qui n'en ont pas vraiment les moyens et qui engendrent des générations de dizaines de millions de jeunes sans éducation, sans espoir et sans discipline sociale ou familiale.

Que le Sud ne soit pas capable indéfiniment de payer ses dettes, d'acheter nos produits, de protéger notre environnement, de respecter nos valeurs, de s'empêcher de déstabiliser notre monde, c'est évident. Que le Sud soit en train de changer notre monde avec une force et une magnitude dépassant tout mouvement social depuis le XVII^e siècle, c'est aussi l'évidence. Et pourtant le Nord feint de ne rien voir ou, s'il voit, il n'agit pas comme il le devrait. Nous continuons d'investir dans l'axe Est—Ouest tel que nous le concevons sans égard au changement radical qu'il subit. Nous continuons de faire fi de l'axe Nord—Sud même s'il affecte notre bien-être et menace notre sécurité.

Des ressources humaines bien formées et des technologies efficaces bien déployées ont, au fil du temps, donné aux pays du Nord les plus hauts niveaux de vie de l'histoire de l'humanité. La même formule, bien pensée et appliquée sensiblement, peut offrir aux populations du Sud les moyens de forger leur propre avenir et d'améliorer elles-mêmes leur bien-être. Dans le Nord la seule relation de cause à effet on ne peut plus démontrable est celle entre le niveau de recherche scientifique, d'une part, et le niveau de vie, d'autre part. Il en va de même pour le Sud comme en témoignent les réalisations quasi-miraculeuses de certaines économies asiatiques.

Il y a presque 20 ans le Canada a fait oeuvre de pionnier (d'autres gouvernements l'ont suivi depuis) en prenant une initiative : celle d'aider les pays en développement à accroître leur propre compétence scientifique, à déterminer et à résoudre leur propres problèmes de développement. Cette initiative, c'était le Centre de recherches pour le développement international (CRDI). Au cours des 19 dernières années, le Conseil des gouverneurs du CRDI, à composition internationale, s'est employé,

Les expressions «Est-Ouest» et «Nord-Sud» sont passées dans le langage courant depuis plusieurs décennies. À l'origine, elles résumaient d'une manière simple et frappante la pensée sur les relations internationales complexes de l'après-guerre. Mais elles ont aussi fait beaucoup plus que cela. Elles ont façonné les attitudes à tel point qu'elles menacent aujourd'hui la compréhension même des idées qu'elles prônaient. De la simplification nous sommes tombés dans le simplisme.

Les systèmes et les processus mondiaux évoluent, à l'heure actuelle, à une vitesse vertigineuse. «Est-Ouest» et «Nord-Sud» risquent de nous emprisonner dans des façons de penser non seulement démodées, mais dangereuses.

Sur l'axe Est-Ouest s'observent de plus en plus d'idées neuves et de gestes audacieux, et pourtant, les attitudes formées à une époque antérieure et différente mettent en danger la bonne gestion des rapports est-ouest. Les mots mémorisés il y a quarante ans façonnent les images d'aujourd'hui.

Sur l'axe Nord-Sud les impressions démodées et dangereuses sont encore plus frappantes. Les pays en développement du Sud dépendant pour leur bien-être des États industrialisés du Nord. Voilà une idée qui est encore solidement ancrée dans l'esprit d'un trop grand nombre de gouvernements et de publics à une époque où le contraire est peut-être plus près de la vérité. Le jeu des pressions démographiques combiné aux écosystèmes en voie de dégradation, aux transferts financiers et à l'instabilité politique dans le Sud fait peser un risque sur le Nord. On ne peut plus penser que les événements qui se déroulent dans le Sud n'influencent que marginalement sur le dessin du Nord. Et, c'est hélas! encore trop souvent ce que l'on pense.

Ce sont des personnes dans des pays très éloignées du Canada qui décident des intérêts et de l'avenir des Canadiens. Le Canada ne peut influencer à son gré le cours des événements dans ces pays, mais il n'est pas pour autant tout à fait impuissant. Notre volonté d'agir dépend de ce que nous savons du vécu réel de ces pays et non des idées arrogantes véhiculées par l'expression «Nord-Sud».

C'est du Sud que vient une bonne part de la menace à la salubrité de notre atmosphère. Continuant d'empoisonner notre air avec les gaz toxiques que nous produisons, nous avons compté sur les forêts tropicales humides du Sud pour le

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Centre de recherches pour le développement international

Le Centre de recherches pour le développement international (CRDI) est une corporation instituée en 1970 par le Parlement du Canada pour encourager et subventionner des recherches techniques et scientifiques réalisées par les pays moins avancés, pour leur propre bénéfice.

Les domaines d'étude auxquels le CRDI prête une aide professionnelle et financière concernent : l'agriculture; l'entreposage, le traitement et la distribution des vivres; la nutrition; la foresterie; les pêches, la zootechnie; l'environnement; l'énergie; les maladies tropicales; l'approvisionnement en eau; les services de santé; l'éducation; la démographie; l'économie; les communications; les politiques urbaines; les questions liées aux femmes et le développement; les sciences de la terre et du génie et les systèmes d'information.

Bien que les fonds du CRDI proviennent totalement d'une subvention du gouvernement du Canada, le CRDI est dirigé par un Conseil des gouverneurs international, formé de 21 personnes. Aux termes de sa loi constitutive, le président, le vice-président et neuf gouverneurs doivent être de citoyenneté canadienne; parmi les dix autres gouverneurs, en fait sept sont des ressortissants de pays en développement.

Les programmes du CRDI aident les pays en développement à se doter des capacités et des institutions scientifiques requises pour résoudre leurs propres problèmes.

Le CRDI met en évidence le rôle du scientifique dans le développement international et encourage les pays du Tiers-Monde à faire appel aux capacités de leur propre communauté scientifique. Les projets de recherche subventionnés par le CRDI sont proposés, élaborés, dirigés et administrés par les chercheurs du Tiers-Monde dans leurs propres pays, en fonction de leurs propres priorités.

Le CRDI aide à la création et au soutien de réseaux de recherche internationaux qui permettent aux pays en développement de profiter mutuellement de leurs travaux, de mettre en commun leur expérience et d'effectuer des recherches visant un même but. Il favorise également la coopération entre les chercheurs des pays en développement et leurs homologues canadiens.

Le CRDI, dont le siège est à Ottawa, a six bureaux régionaux :

- Bogota, Colombie : Amérique latine et Antilles
- Le Caire, Egypte : Moyen-Orient et Afrique du Nord
- New Delhi, Inde : Asie du Sud
- Nairobi, Kenya : Afrique orientale et australe
- Dakar, Sénégal : Afrique centrale et occidentale
- Singapour : Asie du Sud-Est, de l'Est et pays du Pacifique

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Chairman of the Board
Président du Conseil

1e 15 juillet 1989

Le très hon. Joe Clark, C.P., Député
Secrétaire d'Etat aux Affaires extérieures
Ministère des Affaires extérieures
125, promenade Sussex
Ottawa, Ontario
K1A 0G2

Monsieur le Ministre,

Conformément aux dispositions de
l'article 22 de la loi constitutive du Centre de
recherches pour le développement international,
j'ai l'honneur de vous faire parvenir, sous ce
pli, le Rapport annuel du Centre de recherches
pour le développement international pour
l'exercice financier ayant pris fin le 31 mars
1989 comprenant les états financiers du Centre
et le rapport du Vérificateur général.

Je vous prie d'agréer, Monsieur le
Ministre, l'assurance de ma haute considération.

Janet M. Wardlaw

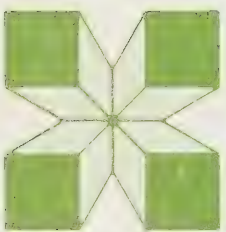
Janet M. Wardlaw

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Bureau régional d'Asie du Sud IDRC, 11 Jor Bagh, New Delhi 110003, Inde	
Bureau régional d'Afrique orientale et australe IDRC, PO Box 62084, Nairobi, Kenya	
Bureau régional d'Afrique centrale et occidentale CRDI, BP 11007, CD Annexe, Dakar, Sénégal	
Bureau régional d'Asie du Sud-Est et de l'Est IDRC, Tanglin PO Box 101, Singapour 9124, République de Singapour	
Veuillez adresser vos demandes d'information au sujet du CRDI et de ses activités au bureau de votre région.	

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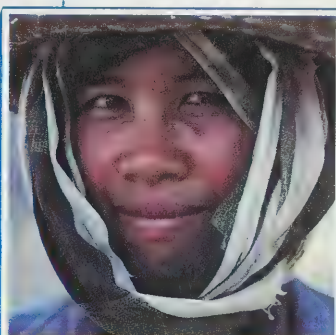
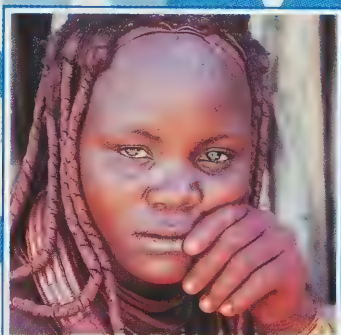
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IDRC

Annual report
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IDRC, PO Box 8500, Ottawa, Ontario, Canada K1G 3H9

Regional Office for Southeast and East Asia

IDRC, Tanglin PO Box 101, Singapore 9124, Republic of Singapore

Regional Office for South Asia

IDRC, 11 Jor Bagh, New Delhi 110003, India

Regional Office for Eastern and Southern Africa

IDRC, PO Box 62084, Nairobi, Kenya

Regional Office for the Middle East and North Africa

IDRC/CRDI, PO Box 14 Orman, Giza, Cairo, Egypt

Regional Office for West and Central Africa

CRDI, BP 11007, CD Annexe, Dakar, Senegal

Regional Office for Latin America and the Caribbean

CIID, Casilla de Correos 6379, Montevideo, Uruguay

Please direct requests for information about IDRC and its activities to the IDRC office in your region.

The cover reflects the global theme of this annual report through the faces of Africa, Latin America and the Caribbean, Asia, and Canada.

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INTERNATIONAL DEVELOPMENT RESEARCH CENTRE

CENTRE DE RECHERCHES POUR LE DEVELOPPEMENT INTERNATIONAL

Chairman of the Board
Président du Conseil

July 14, 1990

The Rt. Hon. Joe Clark, P.C., M.P.
Secretary of State for External Affairs
Lester B. Pearson Building
125 Sussex Drive
Ottawa, Ontario
K1A 0G2

Dear Minister:

In accordance with Section 22 of the International Development Research Centre Act, I have the honour to transmit herewith the Annual Report of the International Development Research Centre for the fiscal year ending March 31, 1990 which includes the financial statements of the Centre and the Auditor General's report thereon.

Yours sincerely,

Janet M. Wardlaw

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PO Box 8500, Ottawa, Ontario, Canada K1G 3H9

IDRC, Ottawa CA

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Annual Report 1989–1990

International Development Research Centre

The International Development Research Centre (IDRC) is a public corporation created by the Parliament of Canada in 1970 to stimulate and support scientific and technical research by developing countries for their own benefit.

The fields of investigation to which IDRC gives its financial and professional support include: farming; food storage, processing, and distribution; nutrition; forestry; fisheries; animal sciences; environment; tropical diseases; water supplies; health services; education; population studies; economics; communications; urban policies; issues relating to women in development; earth and engineering sciences; and information sciences.

Although IDRC is funded by the Canadian Parliament, its operations are guided by an international 21-member Board of Governors. Under the IDRC Act, the chairman, vice-chairman, and 9 other governors must be Canadian citizens; currently, 7 of the remaining 10 governors are from developing countries.

The programs that the Centre supports help developing countries build the scientific competence of their institutions and researchers so that these countries can work to solve their own problems. Research projects supported by IDRC are, therefore, identified, designed, conducted, and managed by developing country researchers in their own countries, to meet their own priorities.

IDRC helps to create and supports international networks through which developing countries can learn from each other, share common experiences, and conduct similarly designed studies in areas of mutual concern. The Centre also promotes cooperation between researchers in developing countries and their counterparts in Canada.

IDRC has its headquarters in Ottawa, with regional offices in

- Cairo, Egypt (Middle East and North Africa);
- New Delhi, India (South Asia);
- Nairobi, Kenya (Eastern and Southern Africa);
- Dakar, Senegal (West and Central Africa);
- Singapore (Southeast Asia, East Asia, and the Pacific); and
- Montevideo, Uruguay (Latin America and the Caribbean).

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Introduction

The Parliament of Canada created the International Development Research Centre (IDRC) 20 years ago in a display of unanimity that was as rare as was the enthusiasm with which the Members of Parliament approached this task. Parliamentarians were aware that never before had a country of the Organisation for Economic Cooperation and Development (OECD) created — and agreed to finance entirely — an international institution, agreeing in the process to relieve it of the burden of domestic bureaucratic constraints. The mechanism they chose for this *léger de main* was an international Board of Governors, selected on the basis of their scientific accomplishment and developmental experience.

In the span of two decades, this Board has attracted a richness of talent and acclaim unsurpassed elsewhere; it has been composed throughout of individuals whose names and accomplishments are legend. The developing countries have been well served by them, as have all Canadians whose future is increasingly dependent upon a wholesome environment, upon economically buoyant trading partners, and upon socially responsible and politically stable members of the international community.

At the first gathering of the Governors, in 1970, the potential of IDRC was well understood, as was the burden that rested upon it. The observations made then were years ahead of the popular perspective:

- Northern technologies were seldom of immediate advantage to countries in the South, it was said, even if transfers were possible;
- Energy-dependent, environmentally damaging activities were to be discouraged;
- The errors and failures associated with alien, top-down development approaches must be understood and avoided;
- Local cultural and societal traditions must be observed and respected;
- The role of women must be studied and the well-being of women and children bettered;
- Discarded northern practices and products must not be passed off on developing countries; and, above all,
- The research activities supported by IDRC must be undertaken by developing-country scientists within their own institutions because

only in this way can competence be enhanced and problem-solving emerge.

For 20 years, IDRC's staff has endeavoured to remain constant to these visionary directions and to keep pace with succeeding waves of brilliant interpreters of the world scene who serve on the Board. These men and women have emphasized that development is a qualitative exercise, not a quantitative one, that quality of life and individual human dignity are the appropriate goals, that science and technology are the servants of humans, not the reverse, and that development in its broadest interpretation is the only effective path to sustainable security.

Twenty years and 2 000 research projects later, IDRC is proud of its record, is touched by the cascade of awards and citations it has received, and is warmed by the realization that it has contributed to the betterment of life in many places. IDRC has changed constantly during that period, endeavouring always to be more responsive, to be most effective. It seeks to make a difference. However, its Board of Governors always insists that its role is subsidiary — to help the developing countries help themselves.

In an era when financial resources are constrained, when all-too-many Canadians seem to be preoccupied by the narrowest of self-interest, and when the ineptness of inappropriate technologies serves as a disincentive to research support, IDRC will endeavour to deserve in the future, as it has in the past, its reputation as an innovative, intellectually honest, and human-oriented organization. In the pages that follow, IDRC reports to Parliament, as its statute demands, on its activities in the past fiscal year.

Divisional summaries

Agriculture, Food and Nutrition Sciences

The Agriculture, Food and Nutrition Sciences Division (AFNS) helps ensure access to food and other basic necessities for the individual through the sustainable use of renewable resources. The Division strives to achieve stable and sustainable increases in productivity while maintaining environmental integrity and to increase income and employment opportunities. Ensuring that the benefits of research serve the most disadvantaged groups is explicitly emphasized. Support is designed to strengthen the capacity of research institutions in developing countries to address these objectives.

Support to research is organized under six programs and two units:

- Animal Production Systems Program,
- Crop Production Systems Program,
- Fisheries Program,
- Forestry Program,
- Post-Production Systems Program,
- Agricultural Economics Program,
- Environment and Sustainable Resource Management Unit, and
- the Centre-wide Nutrition Unit.

During the past year, the Division's program structure has been partly changed as a way of improving its ability to address nutritional and environmental concerns. The Environment and Sustainable Resource Management Unit was created to help improve the integration of environmental concerns in the work of other programs. The Nutrition Unit is an IDRC-wide unit housed in the Division. The programs can be visualized as a matrix, with the Post-Production Systems and Agricultural Economics programs along with the newly created Environment and Sustainable Resource Management and Nutrition units interacting across the commodity-oriented programs.

Africa

By far the most important economic activities in Africa are in agriculture. The region is marked by widespread poverty, intermittent famine, and the world's highest population growth rate. Although

population densities are still relatively low (compared with Asia), pressure on the land is rapidly increasing. Traditional farming systems are unable to meet the increased demands for food. The transition to more intensive farming is causing major problems in many areas as lands with high potential become fragmented and marginal lands are brought into intensive production despite the risk and low returns. Many countries have seen rapid deterioration of the basic infrastructure on which most traditional development plans are built. The terms of trade for Africa's commodities have worsened. Structural adjustments have had a negative effect on services provided by governments, compounding problems in certain areas with institutions that are already weak.

Protecting the resource base is of fundamental importance in Africa. Several recent Divisional projects tackle this problem directly. Three interprogram–interdivisional projects focusing on the degradation of the North African rangelands (*Pastoral systems of the Maghreb*) in Algeria, Morocco, and Tunisia examine production and sustainability of agropastoral systems in the Maghreb steppe. These projects will design and test a series of agronomic, pasture, and livestock management technologies to improve and stabilize production systems. As well, the Division continued its long involvement with the development of promising agroforestry techniques with *Farm forestry* in Malawi and *Agroforestry systems* in Cameroon. These projects respond to the need to support sustained agricultural production. The second phase of *Fuelwood plantations* in Botswana directly addresses the increasingly acute shortages of fuelwood that affect most of the continent.

The Division also supported a wide variety of research initiatives aimed at improving productivity: the other side of the sustainability equation. The Crop Production Systems Program supports component research for important staple crops — roots, sorghum, grain legumes, and bananas — as well as regional initiatives in direct partnership with national programs, other IDRC programs and divisions, and international agencies. A second phase of the *Root-crops Network* in eastern and southern Africa will continue successful root-crop improvement programs, training activities, and some very encouraging linkages of stronger national programs with weaker ones. A similar effort in oilseeds, the *Oilseeds Network*, facilitates the exchange of information, research results, and germ plasm among national programs

in eastern Africa and between these programs and those of India and other South Asian countries that are active in sesame, sunflower, and brassica research.

The improvement of animal production through improved pastures and use of agricultural by-products is being addressed by the second phase of the *Trifolium rhizobia* project in sub-Saharan Africa and *By-products* in Nigeria. *Rabbit production* in Uganda seeks to improve the production of high-quality food from small stock. Given the importance of livestock in West Africa, a Program Officer for animal sciences was placed in the West African Regional Office to increase IDRC's support in this area.

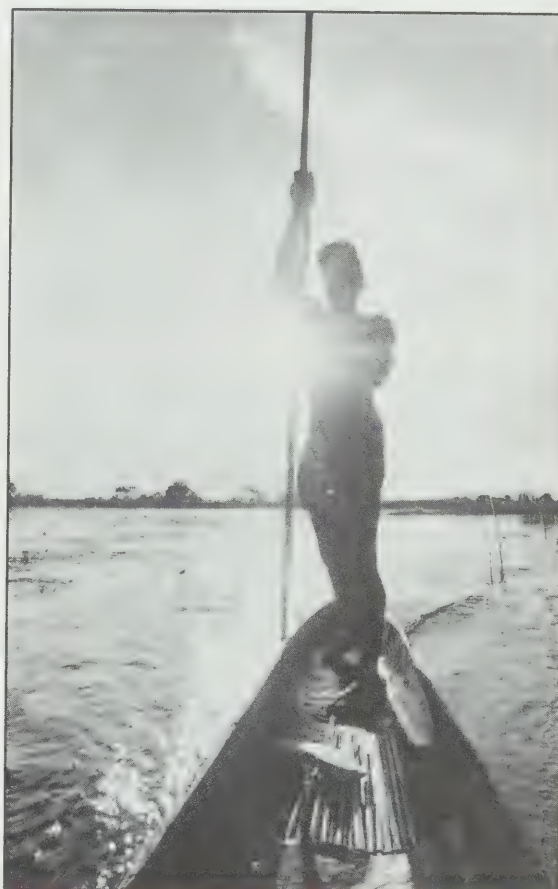
Marine and inland fisheries resources on the continent are substantial, but development has been limited. Research has an important role to play, but institutional research capabilities are generally weak. Support to fisheries research has been focused in two high-potential topics: inland artisanal fisheries in the African Rift lakes plus small dams and reservoirs, and aquaculture with particular emphasis on optimizing traditional systems. New projects this year have focused mainly on the inland artisanal-fisheries sector through *Small-scale fish systems* in Kenya and *Small dams* in Côte d'Ivoire.

Efforts continue to enhance food availability, security, and nutritional value through improvements to postharvest systems, small-scale milling systems, edible oilseed-processing systems and equipment, and drying and storage systems. A second phase of *Soybean utilization* at the International Institute of Tropical Agriculture will continue and expand a research and dissemination activity that has been very successful in promoting greater local production and use of soybeans. The complementary *Soybean threshers* in Nigeria addresses an identified bottleneck to wider soybean use. This approach to problems from a systems perspective was extended with the new *Sorghum and millet food-feed system* project in Kenya. A concerted multidisciplinary effort went into defining priority commodity and food systems as well as the methodology for doing this effectively. Several projects included experimentation with rapid rural appraisal techniques for better defining beneficiaries' problems and analyzing the policy environments for introducing technical change.

Systems for monitoring the effects of economic deterioration at the household level are of particular concern. The Nutrition Unit has contributed to a Health Sciences Division project in rural Kenya that will assess patterns of seasonal

hunger and coping strategies. In West Africa, three related projects (*Rural development and nutrition* in Bénin, *Food security and nutritional status* in the Congo, and *Nutrition and agriculture* in Nigeria) confront issues of community food security, agricultural change and nutritional status, nutrition of infants and children, and the effects of structural adjustment policies on nutrition.

Increased support is being given to scientists to work directly with the people involved in production and utilization systems for renewable natural resources. This contributes to a better understanding of the total systems and enables researchers to focus on those aspects of the systems most likely to lead to sustainable increases in income and employment opportunities. *Vegetable*



oil-protein systems — phase III in Kenya, *Local organizations support* in West Africa, and *West African farming systems research network — phase II* are all multidisciplinary participatory research projects that bring various stakeholders and the intended beneficiaries into the research process while the problem is being defined.

Latin America and the Caribbean

This region is characterized by a rapidly growing population, considerable natural-resources potential, and a great diversity of agricultural production environments and products. It is also highly urbanized with consequent market economies and demands. Income distribution is highly skewed. The destruction of lowland humid ecosystems through inappropriate production systems is a major concern.

A major research thrust in this region involves efforts to improve the living conditions of artisanal fishing communities. Fish protein is a critical nutritional source for some segments of the population and the fishery is an important source of income and employment, particularly in coastal areas. Support is broadly focused under two large regional networks: Artisanal Fisheries Network and the Regional Aquaculture Network for Latin America. Under the former network, continued support has been provided under the regional *Integrated coastal development* project. Several projects linked to the aquaculture network received support, including *Aquaculture development thrust (Latin America)*, *Invertebrates—seaweeds (Chile) — phase III*, *Marine larvae production (Latin America)*, *Fisheries development (Chile) — phase II*, and *Fisheries training seminar (Latin America)*.

Expansion of the agricultural frontier in the low-lying, humid tropics of Latin America and the Caribbean requires careful management. Projects such as *Silvipastoral systems* and *Nitrogen-fixing trees* in Costa Rica aim at developing technologies that combine the use of multipurpose leguminous trees and grasses to improve animal production while protecting the environment. Other projects, such as *Amazon piedmont systems* in Peru and *Watershed management* in Colombia, explore further the potential for the use of multipurpose trees and the motivations of farmers to use trees more effectively in their management systems.

Degradation of the productive resource base in the Andes is a major factor leading to widespread poverty and out-migration to the larger cities. The Division is addressing this through the Andean development thrust by support for farming systems

and germ-plasm maintenance and improvement of high Andes crops.

Nutritional decline resulting from recent, severe, economic depression in the region is evident: conditions at the household level must be better understood. IDRC's concerns for nutrition are development of a methodology for problem identification, nutritional surveillance at the household level, and promotion of interdisciplinary research. These concerns are addressed by building nutritional objectives into IDRC-supported agricultural research projects and through specific projects such as *Health and nutrition impact on plantation workers' families* in the Dominican Republic.

The Division has also been able to link programing directly to employment and income generation and satisfaction of basic human needs. Major emphasis has been given to developing small-scale enterprises to serve market demands, creating rural and peri-urban income opportunities, and improving availability of better quality food and other biomass-based products. A network of nongovernmental organizations (NGOs) promoting small agroindustry processing enterprises has been initiated. Projects approved in this vein include the third phase of *Rural food processing* and the second phase of *Cassava processing* in Colombia, *Rural enterprises (Latin America)*, and *Tree-crop processing (Peru)*. Some of these projects, as well as others such as *Credit analysis* in Colombia and the third phase of the regional *Nitrogen-fixing trees* project, encourage the participation of national agricultural economists in working on the problems of the rural poor and developing research methodologies that increase the efficiency of scientists' work.

The Division pursues opportunities in underutilized and under-researched plants and animals. *Guinea pig-production systems — phase II* in Peru aims at improving the production of high-quality protein foods. *South American camelids — phase III*, also in Peru, aims at improving the income of highland peasants, one of the poorest strata of the rural population of Latin America, through the production of alpaca.

Asia

In many parts of Asia, and particularly Southeast Asia, the problem is shifting from one of production to one of distribution. With relatively strong research systems and government support in many countries, the Division's focus has, therefore, shifted somewhat toward program support designed to benefit those people who have been left out or



marginalized by the development process. Population density in Asia is a major factor guiding resource allocations in the region. Land restriction emphasizes the need for improved efficiency of production as well as large increases in rural employment opportunities. Environmental pressures are extreme in many areas, and the need for sustainable resource management and alternative pest control is strong.

The Division is responding to the need for improved efficiency and focus on the poor by directing support to research on small animals, especially those able to use less costly feeds. For this reason, research on small ruminants is given high priority. Sheep and goats require lower capital investment than larger ruminants and are more flexible in terms of feed requirements, making them a particularly valuable resource for small-scale farmers and the landless. The *Small Ruminants Network* will help strengthen the research capacity of national programs in Asia. Likewise, the second phase of *Duck feeding systems* in Indonesia aims at improving the production of high-quality meat by the more efficient use of existing feed resources at the village level.

Improved fish production is another viable strategy in the push for increased food production. Asia has large, but now limited, fishery resources, as well as a long tradition in aquaculture, and it is in this area that the greatest potential for improvement lies. Research interventions by IDRC have primarily focused on understanding the traditional systems and assisting in optimizing them. Most support is focused under a series of disciplinary aquaculture networks on fish health, genetics, nutrition, and socioeconomics.

Sustainable production and participatory approaches to research and development have been priorities in the region. Development and institutionalization of farming systems research in many countries has been a major accomplishment, as has been the encouragement, technical back-stopping, and financial support to integrated pest management; a new project on this topic is *Botanical pesticides* in Thailand. Dissemination of the results of these initiatives is carried out largely through the sustainable-agriculture newsletters. These were originally the direct responsibility of IDRC staff, but are now in the able hands of NGOs.

Cropping systems remain an important focus in Asia. The needs of two of the region's smaller countries are being addressed by the second phases of *Rice farming systems* in Bhutan and *Grain legumes* in Nepal.

The importance of agroforestry systems as a means of improving sustainability is also being increasingly recognized in Asia. Projects supported include *Agroforestry* in India and *Fruit trees* in Thailand. The great, but previously unresearched, potential for generating increased income and employment offered by bamboo and rattan remains a major component of the forestry program. *Farm forestry* in China and *Bamboo mat board* in India continue this focus.

Asia is home not only to large numbers of people but also to some of the oldest traditions and technologies for biomass use and conservation. The need to produce, conserve, and distribute large volumes of food and to provide employment opportunities has led the Post-Production Systems Program to several problem foci. One is

improvements to grain handling, drying, and marketing systems to increase efficiency and grain quality and to reduce losses. Projects approved in these problem areas include the second phase of *Aflatoxins in maize* in the Philippines and *Passive crop dryer* in Indonesia. A second focus is on fruit and vegetable handling and marketing principally as a source of income. For example, *Banana postharvest technology* in the Philippines aims to reduce losses that are currently estimated at 50% of bananas shipped by small-scale producers.

Nutritional adequacy among Asian populations is variable. Despite achieving self-sufficiency in food production, the Indian subcontinent contains the greatest numbers of malnourished people. Poor access to food because of sociocultural factors and inequities in distribution and consumption are key determinants of nutritional status in the region. Young women and infants are especially prone to malnutrition. To assist this important sector, support has been provided to the Nutrition Foundation of India to develop and test models for effective nutrition training of adolescent girls (*Nutrition education for young women*). In northeast Thailand, an interinstitutional project has been developed to formulate and implement appropriate nutrition programs for the region. A nutrition component is also included in the large *Farm forestry* project in China to permit the effects of forestry programs on the nutritional status and well-being of the poor to be assessed.

Global

In addition to the program activities described, several divisional activities over the past year are worthy of note. The Division circulated a paper that proposes an innovative approach to improving control of pesticide hazards where national regulatory capacity is weak. It outlines the role that an external "hazard auditor" might play in certifying industry's adherence to accepted standards of health and environmental protection, much as a financial auditor does with respect to accounting principles. Options for the establishment and operation of a hazard audit unit are outlined. More than 130 copies were distributed to representatives of industry, developing-country regulatory agencies, researchers interested in pesticide issues, and to a number of NGOs. The response has been very encouraging, and the Division plans to convene a workshop around the middle of next year to move the idea forward.

In a second undertaking, the Division prepared a background paper that discusses the concept of plant breeders' rights, and of plant patents, and

highlights some of the major potential ramifications of legislation in this area. This was circulated to a select group of scientists and research managers both in Canada and in developing countries. The Division is now considering the next step in light of the useful feedback it received and in light of the significant, recent developments on this topic. It sees its role as ensuring that developing-country scientists participate in the international debate of this important issue.

The Division has also been actively involved in efforts currently under way to incorporate forestry research within the mandate of the Consultative Group on International Agricultural Research and in discussions to improve international fisheries research.

Communications

The primary business of the Communications Division is to seek ways of having the results of IDRC-supported research used. In these endeavours, the Division supports both research and practice to ensure the communication of research results that will have a positive effect in the lives of people in the developing world. The scientific community is but one constituency to be reached through communication experimentation and practice. Other equally important constituencies are policymakers, government leadership, intermediary- and community-level agencies and organizations, and individuals.

The Division is also responsible for the overall coordination of public education, media and government liaison, and publications strategies designed to respond to and encourage requests for information by key publics. A proactive approach is applied in the Division's activities to educate people on research and development issues. The Division publishes opinion documents, project reviews, brochures, etc., on a host of development-related issues; organizes news conferences, media seminars, and weekly news services; and funds other special projects and national exhibits for better understanding by Canadians.

The Division has participated in several television documentaries and information programs to bring Canadians up to date on Third World issues and the role of science. They include the television series "North-South," a coproduction with the British Broadcasting Corporation (BBC) on the environment, and a new series on IDRC-supported research projects in Africa, Asia, and South America called "Changing Worlds."

To ensure that the results of IDRC-funded

projects are disseminated within the developing and developed world, in 1989–90, the Division published 56 monographs, technical studies, proceedings, and manuscript reports (these are listed on page 78). Of these, 17 resulted from African projects, 5 from Asian, and 7 from South American; 3 dealt with Canadian issues and 24 had a global focus. The Division also supports the publishing activities of project recipients, especially when the activity can stimulate book production in the developing world. In 1989–90, 31 such books were produced: 3 stemming from African research, 11 from Asian, 8 from Latin American, 1 from Canadian studies, and 8 of a global nature.

The Communications Division's choice of tools and methods focused on end users and

beneficiaries. These tools included market appraisal and social marketing; extension methodology; commercialization strategies; communication flows among communities, institutions, and policy-makers; educational media; nonformal education; and the design, production, and testing of print and audiovisual materials.

A large part of the Division's project funding, related to practical application of research results and building of indigenous capability in using research results, was undertaken in collaboration with other divisions or was related to results of the research projects that had been funded by other divisions. This close relationship applies to all the program divisions of IDRC. Last year's reduction in the program budget limited the Division's ability to participate in multidivisional project development; however, a positive aspect of this has been increased consultation with other divisions and closer monitoring of projects by the program staff.

Africa

The decade of the 1990s is a key turning point in Africa's future. Although social demands are greater than ever in most countries, threats to socioeconomic survival have reached an unprecedented intensity. Development indicators have undergone drastic changes fueled by internal disarray and external factors. Political instability, infant mortality, drought, famines, and socio-ecological disruptions dominate the African scene. In such conditions, efforts to develop communications projects have been rather difficult in most cases.

In the past year, the Division's efforts to improve West Africa's research and development abilities have focused on *Improving communications between research institutions and extension services* through the African Association of Science Editors and assisting the Togolese scientific research bodies in assessing and *Disseminating research results* on a national level.

In East Africa, a public-awareness campaign will be carried out to disseminate oral-hygiene findings from a project previously funded by IDRC. In another effort to ensure that the results of IDRC-funded research are used, the Division is funding the design of a video production and a nontechnical workbook on the monitoring and management of water supply in a semi-arid area of the Kibwezi community in Kenya. Recognizing the impact of the mainstream media, particularly news agencies, in disseminating scientific innovations, the Division will assist the All Africa Press Service



to disseminate the results of research throughout Africa.

In North Africa, a project with the Centre for Development Communications in Cairo is concerned with the delivery of complex health messages to illiterate and semi-illiterate people through television soap operas. The result of this work could assist health-education and health-delivery systems in countries with a high density of television receivers.

Latin America and the Caribbean

The debt crisis and inflationary pressures, experienced by most countries of the region, have affected or limited support to research, especially to the NGO community. The Division's efforts in Latin America have tried to lessen the effects of this lack of support. Projects have been supported to facilitate transfer of research findings from the laboratories to manufacturing-sector and community-level institutions with the aim of assisting employment generation. The Division has also responded to proposals arising from the problems of increasing drug abuse and incidents of sexually transmitted diseases.

A project in Chile is promoting the transfer of an improved baking technology that emanated from two projects of the Agricultural, Food and Nutrition Sciences Division. Another project in Colombia, *Communication and technology transfer*, aims at strengthening the technology-transfer activities of agricultural research institutions in Latin America as well as the effectiveness of their technology transfer officers. A project in Costa Rica will produce and pretest an integrated training package on community participation in introducing and promoting water-supply and sanitation technologies.

In the case of drug-abuse prevention and in sexually transmitted diseases (STDs), two projects have been supported, one in Colombia and the other in Peru. The first, *STD and AIDS prevention for adolescents*, will prepare a video tape with supporting material for use in a health-education program in the Andean region. The second, *Communication strategies for drug-abuse prevention*, will develop and evaluate a community model for training on drug-abuse prevention.

Asia

Asia is a continent that includes several newly industrializing countries, with relatively sophisticated scientific research and development institutions, as well as some of the poorest countries in the world with little capability to divert resources

for scientific investigations. The Division's efforts have, therefore, been targeted on the needs of individual countries rather than on a strategy for the continent. In general terms, however, the projects supported could be grouped under "Community participation processes," "Communication systems and technologies," and "Dissemination and application of research results." The following are some examples of projects supported by the Division in South and Southeast Asia.

The second phase of *Science popularization* will experiment with participatory audiovisual techniques to develop innovative approaches for identifying needs and solving problems in isolated mountain communities of Nepal. Another project, *Women's radio*, in the Philippines will initially train women in development broadcasting, interpersonal communication, and leadership skills and then evaluate the effect of women's involvement in participatory radio programming.

The Division has supported activities in South and Southeast Asia in evaluating communications systems and technologies most appropriate for a development activity. In adult education, the Division is funding a preliminary study to pretest a pilot television program that may form the basis for a television series aimed at meeting the literacy needs of illiterate communities in India. In Thailand, the Division supported a project to determine the effectiveness and appropriateness of current programming of a national television channel in delivering educational services to the population. The project will also develop viewer profiles so as to identify the information needs of the audience.

A significant number of projects in South and Southeast Asia were funded by the Division either in collaboration with other divisions or on its own in the area of dissemination and utilization of research results.

A project to promote the use of a jab-seeder aims to help in its fabrication and marketing by selected manufacturers in northeastern Thailand. A project in collaboration with Health Sciences Division will promote safe use of pyrethroid pesticides in China. Another project funded in collaboration with the Agricultural Food and Nutrition Sciences, Social Sciences, and Fellowships and Awards divisions will bring 11 Asian countries together in a network to strengthen and improve production of small ruminants. Two projects, one in India and another in Thailand, were funded in collaboration with the Nutrition Unit and several other Divisions. In the Indian project, aimed at nutrition education of young women, the Division's support will be directed to involving the potential users of



the research results in the research process so as to empower them to deal with their problems and their eventual solutions. In the Thai project, the Divisional component will provide communications support to the research team.

Earth and Engineering Sciences

Activities of the Earth and Engineering Sciences Division for 1989–90 were categorized in three programs. The first program of specialization, Earth Sciences, includes water in the environment, geotechnical engineering, agrogeology, and small-scale mining. The first two research sectors apply engineering principles to solving environmental problems of a geological nature (earthquakes and volcanoes, soil erosion and slope instability, and water supply and potability). The third sector supports research into the extraction and processing of natural resources, particularly industrial minerals used in the poorest countries.

The purpose of the second program, Technology for Local Enterprises, is to fund applied research into solving problems related to the productivity, efficiency, and profitability of small-scale businesses in the Third World. It examines the options available for overcoming technological problems in priority industrial sectors and attempts to establish a local research-resources pool with a view to reaching national industrial-development objectives. Activities undertaken as part of this program are designed to create jobs, increase urban and rural incomes, and help low-income consumers by fostering the production of good-quality merchandise at better prices. The following industrial sectors are

beneficiaries of this program: small mechanical and metallurgical industries, industrial chemical products, and textiles and leather.

Finally, 1989–90 is scheduled to be the last year of the Building Industry, Materials and Technologies Program, which will be eliminated because of budget cuts last year. This program was based on research into locally available construction materials to reduce housing costs, technological research (architectural design and structural design), and construction techniques, which include the creation and use of appropriate tools and equipment for building and the improvement of traditional construction methods. The purpose of the program was to research housing that provides protection against natural disasters such as earthquakes, floods, and cyclones, and that uses techniques and organizational structures that foster independence and participative research by end users. Although this program will be cancelled, several of its components will be incorporated into the remaining two programs of the Division.

Africa

Africa is certainly not a homogeneous continent. There are great disparities between countries, and the solutions to development problems are not homogeneous either. At the end of the 1980s, Central and West African countries were still grappling with problems resulting from rapid and uncontrolled social change, both domestic and foreign. Generally, these concerns can be identified as management of the processes and effects that accompany increasing world economic integration, management of the processes involved in domestic

socioeconomic change, and management of natural resources and measures to counter environmental degradation.

Most of the countries in Central and West Africa are producers of raw materials, and their population growth rates are among the highest in the world. Moreover, the region's natural resources are promising. Compared to the area of the region, however, the exploration work and soil studies conducted to date have not been extensive and, on the whole, basic geological information is slim. In view of these problems, the Division has concentrated its efforts on research designed to identify the region's hydrogeological potential with a view to improving the quality and quantity of available water resources and fostering the emergence of local industries to diversify the region's economic structure at the same time as creating jobs. Another aspect of the Division's activities was to find innovative solutions to housing problems by using local resources to minimize the contribution of foreign currencies to residential construction.

The second phase of the *Quaternary hydrogeology* project in Bénin is intended to improve knowledge of the hydrodynamic conditions of the aquifer systems in the sedimentary basin on the south Bénin coast so as to optimize their development and set up a system to monitor the migration of the salt-water wedge. Wells in the basin already provide 11 million m³ of water annually to the city of Cotonou and its environs. Growing demand threatens to provoke the intrusion of salt water and the infiltration of brackish water through the top of the aquifer. The littoral lenses that rural populations exploit by constructing shallow wells are also threatened by saline intrusion and human pollution. The health situation in this area is particularly critical, and water-borne illness is becoming endemic. Therefore, the project will determine the chemical and microbiological quality of the underground water and establish a network to monitor the salt-water wedge. This project will be carried out by the Université du Bénin in collaboration with the Université de Dakar and Laval University, representing a significant south-south collaborative effort, in addition to Canadian cooperation.

The *Inedible vegetable oils* project in Burkina Faso is designed to replace edible oils with inedible vegetable oils in several applications, thus freeing a significant nutritive source at the same time as contributing to the development of various local small-scale industries.

The project on *Plant fibre-reinforced roofing*

tiles in Côte d'Ivoire is designed to prove the value of local raw materials and to develop a technology that will permit local production of roofing tiles with a minimum of imported components. In this way, the project will make it possible to appreciably reduce the cost of these products for the consumer, to decrease imports of roofing components, to improve housing quality, and to create jobs. The project should, therefore, permit the production of moderately priced vegetable-fibre tiles at the village and district level, and the results will be applicable to similar situations elsewhere in Africa.

Eastern and southern Africa includes 13 of the poorest countries in the world and 7 middle-income economies. Their economies vary greatly in importance and in performance. Generally speaking, the south is more industrialized, and the north more populous. There is also major mining activity in the region, mainly concentrated in countries neighbouring South Africa. Most social and economic activities are still related to agriculture. The manufacturing sector, where it exists, is concentrated first on the textile industry and then almost equally on machinery manufacturing and chemical products. The domestic markets are small, and the infrastructure used to transport agricultural or manufactured products to market is rather faltering.

Hydrogeological concerns are not as important in this region as in West Africa. Geotechnology is relatively well developed in several countries, and mining research is most relevant in Zimbabwe. There are several industrial research centres in this region, notably in Kenya, Rwanda, Tanzania, and Zambia. Divisional activities, therefore, are concentrated on maximizing the existing industrial potential in the following fields.

The *Underground mine support* project is involved in the cooperative artisanal development of a metallic mineral, chromite, by African entrepreneurs and miners in Zimbabwe. This mineral is crucial to the economy of the country. The project deals with the safety of miners in the work place and the planning of mining work by these artisans. Participative research, involving miners organized in cooperatives, is an important component of the project, which will be carried out jointly by researchers at the universities of Zimbabwe and Toronto.

The purpose of the *Baked bricks* project in Rwanda is to improve the local manufacture of baked clay brick for residential construction. Baked clay brick is already used extensively in Rwanda, but its quality is variable, mechanization rudimentary, and funding almost nonexistent. The



project is designed to rectify these shortcomings by optimizing work organization and the various production phases, reducing energy consumption, and fostering the dissemination and distribution of research results. This project is a collaborative effort between the Université nationale du Rwanda and the University of Sherbrooke and was funded jointly with the Social Sciences Division.

The aim of the *Vegetable extracts* project, also in Rwanda, is to establish the scientific and technical base of a natural-source chemical-products industry. The project is focused on four plants likely to produce flavourings that are marketable locally and in markets geared to development. A significant part of the researchers' task will consist of establishing a process for transferring the technology to facilitate the creation of small, local production units that will generate jobs.

The *Processing of cashew nut-shell oil* project in Mozambique is an effort toward industrial profitability in a very disadvantaged country. This oil, which is a by-product obtained in large quantities during the production of cashew nuts, is exported unprocessed to industrialized countries. The project is designed to develop a process to obtain from this oil products of high added value as well as products of vital necessity for Mozambique, such as tar, phenol, and the liquid fuel now used in Mozambique for lighting and cooking, thus maximizing the side effects of an expanding industry.

Countries in the Maghreb are also attracting attention: a good example of projects being pursued by the Division in this region is the *Rif slope* pro-

ject, which focuses on landslides in the mountainous area of northern Morocco. These are a major obstacle to development in this region and have been a longtime concern of Moroccan authorities. The particularly complex geology is characterized by dominant formations of flysch, marl, clay, and schist, which are highly vulnerable to slides. The purpose of the project is to establish the geotechnical parameters necessary to control the instability of the mountains in such a way as to design curative or preventive reinforcement methods that ensure the safety of residents and infrastructures (roads, schools, and villages). The research is being conducted jointly by the École Hassania des travaux publics de Rabat and Laval University.

Latin America and the Caribbean

The decade just ended has been one of the worst in history with respect to the socioeconomic situation and development efforts in Latin America. There has been some talk of the "lost decade" or the pure and simple failure of existing economies. The region is confronted with a most alarming financial and economic crisis, carrying in its wake disastrous social consequences for the countries concerned. The most significant problems are the position of regional economies in the global economy; limited access to new technologies, restricting economic growth and employment; and debt and the impact of the net transfer of resources to developed countries. Development priorities are the improvement of the socioeconomic situation of both urban and rural communities, the development of appropriate technologies, and the creation of incomes and jobs for the poor flocking to and congesting urban areas. In 1989-90, the Division

was primarily active in the area of improving urban living conditions.

The water supply in Mexico City, one of the largest in the world with its population of 16 million, is based on an aquifer from which it draws an average of 56 m³/second. This overexploitation has resulted in lowered levels of ground water that have prompted irregular soil subsidence. This subsidence, and the population density, are contributing to the risks of human-source contamination. *Aquifer development*, in its second phase, is intended to design an effective method of detecting soil-borne pollution, to identify natural recharge sites with a view to their protection, and to improve aquifer management. The Instituto de Geofísica of the Universidad Nacional Autónoma de México, in collaboration with the University of Waterloo, will be continuing research to find solutions to these problems and to insure the water supply of an ever-growing population.

The regional *Seismic hazard* project involves interregional cooperation in applied seismology, a burning issue since the earthquakes in Armenia and the San Francisco region. Research will make it possible to assess the potential dangers resulting from seismic manifestations with the establishment of a standardized regional data bank. The project will produce a complete historical catalogue and a catalogue of available instrumentation. The intensity and frequency of seismic dangers will be calculated for Latin America and the Caribbean. This first major phase is essential to risk determination and accounts for the relative physical and human vulnerability of each subregion. This project, developed in cooperation with the Information Sciences Division, will extend over a period of 5 years. It will contribute to efforts made during the United Nations International Decade for Natural Disaster Reduction.

Also linked to the struggle against natural disasters, the *Cyclone-resistant housing* project in the Caribbean attacks the problem of cyclones that occasionally cause major losses of human lives and damage to housing of the poor in the Caribbean. The project is designed to improve traditional construction methods and to develop appropriate and acceptable building plans for construction by and with the participation of local communities who will be using the results of this research.

Asia

Like Africa, Asia is a region of contrasts in which some countries are better endowed than others, and the industrial infrastructure differs greatly from place to place. Poverty, management

of natural resources (land, water, and forests), malnutrition, food security, housing, demographic pressures, deterioration of terms of trade, and the debt burden are concerns found in differing degrees depending on the country involved. In this context, the Division has again concentrated on maximizing the existing industrial and technological potential while creating opportunities for the most disadvantaged populations. Research into the problems caused by natural disasters has been an important component of divisional activities in this part of the world over the past year.

As part of the Water in the environment subprogram, the Division funded a cooperative project involving the National Hydraulic Center of the University of the Philippines and McGill University's Geotechnical Research Centre. The project deals with the development of a *Water-resources management model for Metro Manila* that will take into account the use of underground and surface water.

A project in India, *Coal workings*, is designed to locate the underground cavities of abandoned coal mines with the help of advanced geophysics. The coal-bearing basin of Raniganj near Calcutta was the first established in India in the 19th century. At that time, the absence of control over coal developments caused serious problems that are still affecting the safety and lives of miners and neighbouring inhabitants. Over the years, miners accidentally breaking through to flooded cavities and the subsidence of soils under these cavities have caused loss of life and significant material damage, affecting primarily low-income residents. The project's primary output will be the development of a new methodology for the three-dimensional representation of underground cavities. It is a sizeable scientific challenge for the Mining, Geological and Metallurgical Institute of India, in cooperation with Laval University.

In the field of industrial technology adapted to local productions, the *Improved processing techniques for low-grade jute and cuttings* project in Bangladesh should be mentioned. This project is intended to maximize the commercial use of jute. Jute fibres and products represent 58% of Bangladesh's exports. This sector employs 2.7 million families in jute production and 1.5 million workers in its processing. Of the entire production, 42% is composed of lower quality fibres, resulting in losses during production and use. The project is designed to study several biotechnical processes designed to maximize the flexibility of second-class jute fibre as well as developing instruments for measuring quality and flexibility. The new process



will make it possible to fine tune and increase methods of controlling the quality of jute production at a lower cost than existing systems. Given the importance of this product for the entire region, the effects of this project will extend far beyond Bangladesh.

A project in the Philippines is dealing with the fight against pollution caused by effluent from the galvanic-plating industry. This project is attempting to find a solution to the problem posed by chrome pollution, by developing economical techniques that make it possible to reduce the quantity of chrome-bearing effluent and to recover the chrome. At present, 3 tonnes of hexavalent chromium are dumped into Lake Laguna every year by these industries. If this lake is to be a source of potable water for the population of Manila by the year 2000, an immediate solution is required for the problem of contamination, including chrome. This project will be a strong complement to the work undertaken as part of the earth sciences program in the Philippines, as previously described.

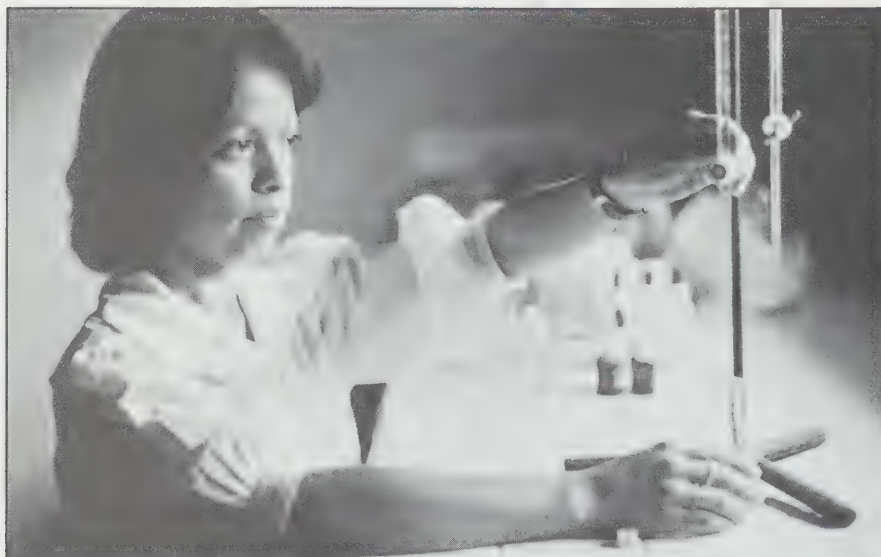
A project in Thailand involves the design and adaptation of an automatic microprocessor control system. The purpose of this project (*Control of manual lathes with microprocessors*) is to permit small-scale machining businesses to automate at low cost to improve their productivity and to maintain constant quality in their production. The cost of the equipment and installing it is sufficient to allow for its amortization over a few months. The small-scale businesses will also be able to undertake work that is now out of their reach because it requires expensive machine tools. Jobs will be created in Thailand and other countries to which the technology might be exported.

Elsewhere, in the context of the regional theme for the area served by IDRC's Regional Office in Singapore, the Division has supported a project on rural housing construction in an area affected by numerous typhoons in the Philippines. This project, *Low-cost housing*, aims at improving traditional house-building techniques by reinforcing and rearranging the structural components to make these houses resistant to the violent winds that stress them. The project will be carried out by a local NGO and will include participative research and a self-funding program for housing by the populations concerned. The results of such a project will extend far beyond the target area, and could eventually be applied in other regions and countries affected by these natural disasters.

Fellowships and Awards

The Fellowships and Awards Division assists research institutions of the developing regions of the world to create a capacity for high-quality research and to develop training institutions in these regions to the point where they can meet their own research-related training needs. Consequently, the concept of capacity building is seen as the unifying and guiding theme of the Division, permeating all of its activities.

The focus on capacity building is a reminder that development cannot exclusively emphasize economic growth. It is also concerned with human beings, especially with building the kind of self-confidence and capabilities required for autonomous goal-setting and decision-making. Indeed, IDRC recognizes that people are the *raison d'être* of development efforts as well as the main



protagonists, and that research — no matter how valid, relevant, or accurate — will never achieve a status as a useful or viable component of the development process unless there are people within each national level and sector with the interest and capacity to initiate, implement, and apply it with vigour and skill. Sustainability remains a critical aim for IDRC: sustainability, in the last analysis, is built on human capacity.

The Division's capacity-building efforts contribute directly to IDRC's objective of establishing autonomous, independent research and training institutions in the Third World. The Division is committed to what it terms the trainer-trainee approach to building research capacity. This approach strives to ensure that an investment in training links and strengthens both the institution that provides the training and the institution whose personnel will receive the training. Consequently, training supported by the Division emphasizes the need to use a developing-country venue, whenever possible, to foster the indigenization of training and to diminish dependence on institutions of the north.

Africa

Of the three continents described in this annual report, Africa is probably the least well endowed in terms of trained researchers or of institutions capable of providing postgraduate education to citizens of the region. Consequently, the Division expends a good proportion of its resources in support of postgraduate degree training and in strengthening existing skills of researchers through highly focused training workshops. Because of the

relative paucity of universities capable of providing postgraduate degree training in the region, many of the master's and doctoral awards provided by the Division are for training in Canada. This is reflected elsewhere in the listing of recipients of awards from the Division (see page 73).

The technical advances in the research enterprise continue to present the greatest challenges to the program in the region. Thus, courses in advanced research methods such as experimental design, data analysis, use of microcomputers, and statistical management packages are quite popular. For instance, one such course, *Use of microcomputers in education research*, in Kenya, introduced 20 senior researchers to the application of microcomputers in analysis and management of education-research data. Other initiatives of this nature that were supported during the course of the year include training in information sciences, library automation, agricultural research management, and management of institutions of higher learning. All of these courses were designed, developed, and offered by researchers and academics associated with institutions in the region, in keeping with the Division's commitment to indigenizing training.

To assess the needs, problems, and approaches relating to human resource development in Africa, hard data are needed on the availability and use of teaching and research resources in the region. A project on *Graduate education and research and development in African universities* was supported during the year with this objective in mind. Specifically, the project permitted the Association of African Universities to develop the tools that will allow it to establish a permanent mechanism for

gathering and processing data, and evaluating the potential of universities in West and Central Africa with regard to postgraduate education and research.

Latin America and the Caribbean

Latin America and the Caribbean has a well-established academic and research community. Thus, the training needs for the region differ considerably from those of Africa. Indeed, most countries have a critical mass of trained researchers, and many of the universities in several of the larger countries (Argentina, Brazil, Chile, Colombia, Jamaica, Mexico, and Peru) are capable of providing postgraduate-level training, at least at the master's level. Consequently, the Division addresses the issue of capacity building and human resource development from a different perspective in this region, with greater emphasis on qualitative adjustments to the systems of higher education, and lesser emphasis on developing a nucleus of trained researchers.

Although the Division has supported doctoral training in Canada for persons from several countries of the region (master's degree training is generally available in the region), several initiatives are directed to strengthening indigenous training capacity and to examining alternative models for higher education. An example of these includes *Training of university senior administrators in Central America and the Spanish-speaking Caribbean*. This project is aimed at providing opportunities to senior higher-education administrators of Central America and the Spanish Caribbean to reflect and learn about the role of universities in their societies, alternative organizational models of undergraduate and postgraduate education, management of teaching and research programs, and long-term planning.

At a time when Latin American countries are most concerned with their ability to compete economically with other regions of the world, research centres and universities are paying more attention to the role that higher-learning institutions can play in a new global scenario characterized by intensive use of knowledge in all sectors of economic development. Against a backdrop of tight budgets, higher education finds itself pressured by concerns of an immediate nature, such as reexamining the relevance of curricula and teaching, contributing to the solution of current development problems, and improving management systems to upgrade research facilities and retain high-level human resources.

Other initiatives include projects in several countries designed to help create, or to support the

strengthening of, postgraduate-degree programs. In Jamaica, the Division is funding the Consortium Graduate School at the University of the West Indies to create a master's program in social sciences and, at the University of Costa Rica, a similar initiative is under way for Spanish-speaking students.

Asia

The greater Asia region, for the purposes of this report, encompasses both South Asia and Southeast Asia. It is a region that has a relatively good supply of trained researchers and a number of good universities that are increasingly capable of dispensing postgraduate education. Thus, the focus for the Division in this region is to enhance the indigenization of training through support for numerous formal and nonformal training programs and to foster south-south collaboration. Indeed, dependence on institutions of the north is diminishing as local institutions become more intellectually self-reliant.

Thematically, the Division is committed to in-project training, to the direct linkage of individual training grants to research activities, and to establishing in the region, to the extent possible, long-term training facilities — in the form of stand-alone learning materials, resource persons, networks, and training courses.

Toward the first end, the Division continues where feasible and appropriate to cofund projects with research divisions, to incorporate human resource development from the outset and, with increased emphasis, to monitor the effectiveness of this "within-study" training approach. Toward the second, greater attention is given to ensuring that any individual training grant, whether using project or fellowship funds, is explicitly linked to the priorities of the supporting research division in terms of the individual selected, the training program followed, and the subsequent incorporation of the trainee into specific research activities. Toward the last, the Division seeks to identify stable venues for, and to support the development of, locally sustainable training courses to address research needs identified across the divisions.

The regional *Small Ruminants Network* project is cofunded with several other divisions of IDRC. Its training plan is consistent with the Division's emphasis on encouraging more contact, exchange, and collaboration between scientists and technicians in South and Southeast Asian organizations and institutions. In this project, trainers and technicians from both regions are being

brought together once a year for short-term training in specific topics, for example, feed resources and artificial insemination. To promote further interaction and exchange, the venues of these training activities shift from one region to the other in the course of the project's duration: Andhra Pradesh Agricultural University and the Central Institute for Research on Goats in South Asia, and the Philippine Council for Agriculture and Resources Research and Development and the University of Malaysia in Southeast Asia.

The *Research management training* project in Southeast Asia, designed and conducted by the Research Management Center of the University of the Philippines in Los Baños, will put into place an institutionally stable, professionally sound venue for training research-project leaders in the theory and practice of project management. As such, it responds to an issue of increasing concern in the region across all divisions of IDRC — the lack of effective management skills among the research teams supported through projects, especially those undertaken in the context of interdisciplinary studies.

Health Sciences

The Health Sciences Division supports research leading toward effective and sustainable systems of community health that will contribute to improved health and well-being of the poor. The research programs of the Division are derived from a holistic model of the ecology of health, embracing the many elements that affect the health of a community and its people. Three such groups of elements constitute the basis of the Division's three research programs:

- Health and the Community (human circumstances and behaviour),
- Health Systems, and
- Health and the Environment.

These programs focus explicitly upon people and their communities, are interdependent and interactive, and form a continuum of research activities on health and health-related problems ranging from those perceived by community members to those identified by health experts. The Health Systems Program links these areas of perception of health problems by supporting research to find effective, equitable, and sustainable solutions. Integrated support for research institutions is an integral part of all three divisional research programs.

The potential scope of the three programs is

large. Each is, therefore, focused, based on criteria that include local and national needs, regional priorities and opportunities, geographic distribution, interprogram coherence and continuity, intersectoral and interdivisional linkages, and the likely speed with which results will be implemented. Such considerations are the basis for setting priorities and making choices for research support.

There are major needs in the developing world related to such problems as debt repayment and structural adjustment, commodity production and terms of trade, environmental degradation, population pressures, desertification, refugee population movements, climatic changes and natural disasters, and epidemics of disease, notably AIDS (acquired immune deficiency syndrome). Many of these are interrelated and affect health.

They cannot all, however, be addressed directly through health research activities. From the health perspective, the following are major issues in the regions; and examples are given of projects supported in addressing those issues.

As regional strategies and plans evolve with the Division's global strategies, specific projects will fit more and more closely within the frameworks. This should become even clearer next year.

Africa

The Division's main concern in Africa is with the sub-Saharan area where, along with economic hardship, environmental degradation is an increasing problem. In some parts of Africa, AIDS is a new epidemic, striking men, women, and children, with grave effects on, and implications for, economic output. AIDS is itself only the most deadly of the sexually transmitted diseases, a growing concern not only for Africa but for much of the world.

A major effort must be made to understand the dynamics of transmission of these diseases, with the emphasis on sexuality and sexual behaviour in existing cultures. Only then can the most appropriate measures be taken to change the prevailing situation.

With the economic downturn, preventive and primary health care have suffered. Thus, infections and parasitic diseases are, if anything, on the increase. Increasing desertification in the Sahel, with the resulting migration of people, has had implications for water availability, water quality, and water-related diseases. Some countries, in trying to industrialize and to increase agroindustrial enterprise, also have to face the problems of chemical contamination of the environment (with



pesticides, etc.), and increasing occupational hazards and accidents.

The “Bamako Initiative” of the World Health Organization, which tries to create an entry point into primary health care through self-sustenance in the community-controlled purchase, distribution, and sale of essential drugs, is of interest to the Division. This effort provided an opportunity for the support of a large project, just getting under way (although appropriated in 1988) for developing and strengthening a series of community health systems in Bénin, with the help of staff from the Université du Bénin, whose capacity for health research for development will simultaneously be increased. This project has implications for other countries in the region and could become a model for community-based health care.

In eastern and southern Africa, the major concerns are communicable and infectious diseases (including AIDS), nutrition, environmental health, and research capacity and institution strengthening. Some relevant projects during this year were:

- The second phase of *Pediatric AIDS* in Uganda, which investigates the vertical transmission from seropositive mothers to their newborn infants;
- *Community prevention of malaria* in Tanzania, which addresses community-based modifications of the environment to curb transmission of the disease in a sound, affordable, and sustainable fashion;
- *Peri-urban sanitation* in Lesotho, which aims to reduce environmental contamination by human wastes;

- *Seasonal hunger and nutrition* in Kenya, which will identify household members who are most vulnerable to the effects of seasonal hunger and the reasons for such vulnerability from a multidisciplinary perspective. “Coping strategies” are the expected outcome;
- *Health sciences education rehabilitation* in Uganda, which aims to provide long-term support to Makerere University, in concert with other IDRC divisions, to redirect its curriculum toward community health-services, to produce appropriate personnel, and to strengthen a regional network of community-oriented health institutions; and
- *Household health-care use and expenditure in rural Kenya*, which will determine patterns of use and expenditures on health-care service at the household level and identify factors that influence them. Policymakers will gain information regarding dependence on the free public-health services at a time when user fees are being contemplated.

In West and Central Africa, where the main concerns are AIDS, desertification (with implications for nutrition and the health of nomads), strengthening of institutional capacity, and networking of researchers, the following projects indicate of the Division’s support during 1989–90:

- *Sexually transmitted diseases* in Senegal will explore social and cultural factors in sexually transmitted diseases leading to a better understanding of culture-specific sexuality and, it is hoped, to appropriate interventions;
- *Child nutrition and agriculture* in Nigeria will

evaluate the impact of agricultural modernization on the health and nutritional status of children under 10 and their mothers;

- *Onchocerciasis control* in Côte d'Ivoire relates to community control of an important water-associated disease causing blindness; and
- In *Food security and nutritional status of households*, Congolese communities and national decision-makers will obtain data concerning those who are malnourished as well as causal factors.

In the Middle East, food security and population are seen as major concerns. Information, education, and communications research are vital in

understanding and modifying behaviour. In this context, *"The Family House"*: a public health soap opera in Egypt, cofunded with the Communications Division, will be used to determine if attitudes, opinions, and practices that influence health can be changed through character identification and social-value reinforcement. Specific, regionally relevant topics will then be the focus of later activity.

The second phase of the *Health-systems research in Thatta District* project in Pakistan, should help in improving the government and community health systems, with better health status for the people. A first phase, funded in 1986, constituted a situation analysis.

Latin America and the Caribbean

In Latin America, there are several major concerns. Among them are the unplanned rural-urban migration, which gives rise to the rapid growth of urban centres, and the concomitant lack or degradation of social amenities and services. This results in an exacerbation of parasitic and infectious diseases, including those due to overcrowding.

Because of attempts at rapid "development," with industrialization and high-yield agriculture, there is pollution of land, air, and water with pesticides, fertilizers, toxic gases, and heavy metals. There are, in addition, somewhat "marginal" populations with special health needs. These include inhabitants of the High Andes, some of whom are in the mining industries, coastal artisans and fishing families, and indigenous population groups, for whom services are not highly developed.

Sexually transmitted diseases, including AIDS, are a particular problem. Some of the countries of Latin America have among the highest incidence of AIDS in the world. Nutrition is also of concern, especially for the poor and for women and children. Projects supported include:

- *AIDS counselling and education* in the Dominican Republic will look at sexual behaviour of HIV-positive individuals (human immunodeficiency virus) and of high-risk groups to develop the most appropriate action;
- *Health and nutrition impact on families of plantation workers* also in the Dominican Republic will evaluate the impact of an integrated rural development program on families on a state-run sugar plantation;
- *High altitude and mining* in Peru addresses the specific health problems of heavy underground work at 4 500 m altitude; and



- *Vector blood meals*, also in Peru, tries to find environmental interventions that would reduce the incidence of both yellow fever and malaria.

Asia

Side by side with the emerging countries of the region, where industrialization has been in progress for several decades, are some of the poorer countries of the world, lacking food, shelter, and clean water. In the former group, problems are arising with respect to occupational health, particularly in those industries that employ women. In the latter group of countries, environmental problems still persist, related to improper disposal of human wastes. Parasitic and infectious diseases are still prevalent and, in some cases (for example, malaria), are once more increasing in occurrence.

The region also has a major portion of the world's population and, despite efforts by such countries as China, populations continue to grow at appreciable rates, with implications for health and general development. Research is needed to understand personal and community behaviour in these respects, as the basis for enhanced action in contraceptive use and family planning.

Efforts are under way to support research, in the near future, in such countries as Myanmar and the Indo-Chinese nations where conditions have precluded IDRC's involvement in the past.

- *Household rainwater catchment* in Bangladesh and *Household water disinfection* in Thailand both seek to promote community- or family-based water provision and purification systems or both;
- *Tropical knapsack sprayer* in Malaysia aims to improve the design of pesticide sprayers for increased safety;
- *Acute respiratory infections* in Nepal tries to determine if infection in children is linked to conditions of shelter and the environment;
- *Breastfeeding practices and working mothers* in Indonesia will investigate practices and problems related to promoting and protecting breastfeeding in the work place;
- *Sociocultural factors influencing contraceptive behaviour*, also in Indonesia, evaluates, using both qualitative and quantitative methods, couples' reasons for beginning, continuing, and ceasing contraceptive use; and
- *Determinants of contraceptive use and effectiveness* in China identifies specific

factors regarding abandonment of contraception and unplanned pregnancy.

Activities in the South Asia region were drastically curtailed this year because of budgetary constraints.

Information Sciences

Information is an important resource for development, and the programs of the Information Sciences Division are aimed at delivering that resource to development practitioners at various points in the information chain that stretches from researchers to the end beneficiaries of research. The Division continues to pursue three main objectives:

- Building indigenous capacities within developing countries to manage and apply information effectively;
- Improving systems, services, and tools to manage and use information relevant to development research and change; and
- Fostering cooperation and coordination in development research by promoting the sharing of information, for example, through strengthening networks.

Project development reflects the needs of different users for a wide variety of up-to-date, relevant information. It is also sensitive to the geographical priorities identified by regional offices and embodied in regional thrusts because these provide an important mechanism for promoting the convergence of IDRC's program efforts. Geographic focus also considers such factors as urgency of environmental problems, potential impacts and benefits, potential for success considering existing infrastructure, potential for a multiplier effect in the region, and south-south cooperation.

Although the Division cannot cover all subjects and types of information, it is investing in demonstration projects to show the value of applying information-science techniques and technologies to practical problems of operational information management for research and planning. Increasingly, additional emphasis is being placed on more applications that are not documentation based (for example, numerical and factual data). In addition, the Division is seeking to reach the intended beneficiaries of research more directly through information outreach at the level of extension workers, community NGOs, and village information centres.

The Division also supports two important

in-house activities that directly benefit developing-country information and research institutions: IDRC's Library and the Computer Systems Group.

A recent survey by the Library of active IDRC-supported projects showed that the most common problem in acquiring information was a lack of resources available locally, closely followed by the cost and time delays in obtaining information from elsewhere. The Library assists these projects in various ways, with research and document-delivery services being those most used. The highest percentage of projects using these services is in Africa, followed by Latin America and the Caribbean, and Asia.

The Computer Systems Group develops, maintains, and distributes MINISIS (interactive microcomputer system for information retrieval), a software package for data-base management developed by IDRC. Through a small program, it also supports the establishment of MINISIS Resource Centres (MRCs) in developing countries. These are currently operational in China and India and in the Middle East, North Africa, and West Africa. Based on current requirements and growth in the user community, MRCs will next be established in Thailand and South and Central America. The Division, together with the MRCs, is investigating various ways to increase the financial self-sufficiency of the MRCs and reduce their dependency on IDRC.

Africa

Africa continues to be confronted with issues related to rapid external and internal economic and social changes, as well as dealing with environmental degradation and the need to more effectively manage its natural resources. Agricultural production and generation of employment are also priorities. The Division's Africa strategy (published as an IDRC technical study *Sharing Knowledge for Development: IDRC's Information Strategy for Africa*), although developed with sub-Saharan Africa principally in mind, provides a useful framework for work across the continent. Some of the important elements include capturing and managing information locally (including indigenous information, information for management, and sectoral information), building national information infrastructures, resource sharing (including networking, use of appropriate standards, and coordination), and human resources development. IDRC's research thrust on desertification will provide an opportunity for support to projects in such areas as small-scale

regenerative and low-input agriculture, or the use of modern information technologies for resource monitoring and management.

Sharing and improving access to scarce information resources was an important theme during 1989–90. A West African project (*Community network of business information and documentation*) will attempt to overcome some of the existing obstacles to trade by establishing a common mechanism for collecting, processing, and distributing trade-related information and by linking an information centre to national chambers of commerce and trade promotion bureaus. Similarly, a *Subregional Centre for Scientific and Technical Documentation and Information* will improve the previously unsatisfactory scientific and technical information structures of Central Africa through the creation of a technical-scientific information centre.

Building on an earlier phase that strengthened a regional clearinghouse for information on standards, another project (*African Standards Documentation Network — phase II*) will develop national participating centres and promote the exchange of information among members, partly through experimentation with the use of telematics techniques. Indeed, the need for better communications among all information producers and consumers led to an Africa-wide project to investigate and experiment with computer-based networking methods and facilities, including messaging, conferencing, and on-line data-base access.

Documentation-based information services still require attention and, for example, a project in Zimbabwe will help establish a national health documentation and information networking centre. This type of information does not, however, meet all needs, especially in the rural areas. Another project (*Rural audio library*), in Mali, will extend existing experience by which rural populations have been involved in information- and education-based development activities with the help of audiocassettes, as well as transcribing and publishing in pamphlet form the best topics formerly transmitted by oral tradition. At the other end of the technological scale, a project (*Telematics and Informatics Information System for Africa*) will establish a West African regional information system on local applications of informatics and telematics technologies, given the current lack of adequate experience in Africa.

Rural development is viewed as the foundation for national development in many countries of the continent, and there is a pressing need for an



adequate survey of agricultural and related resources at the local level. A second phase project (*Local-level mapping*) in Nigeria will expand on the results of earlier work by developing a geographic information system-based method for constructing land-capability mapping at the local scale and will integrate high-resolution remote-sensing data with information from local farmers and data on institutional arrangements for water and land resources management.

The strategy to locate a MINISIS Outreach Officer for West Africa at the MRC in Cameroon has proved to be a sound one. He will continue to develop the skills of the MRC staff and to support users in East Africa (and occasionally other regions) while based in Yaoundé until 1991–92.

Latin America and the Caribbean

Economic and social issues continue to be a major preoccupation in Latin America. In addition to the need for increased social participation, the impact of stabilization policies adopted by many governments is being felt on social programs and income-generation opportunities. On the external front, the debt crisis and net transfers of resources, the effect of international trading blocs, and the need for access to new industrial technologies are providing additional pressures. Although information support cannot solve these problems, it can assist in helping to make better use of scarce resources.

For example, one project (*Information service on innovation*) in Uruguay will support and stimulate the activity of the agents of innovation, particularly small- and medium-scale enterprises.

Establishing an information service on innovation will facilitate the exchange of information or services with technical, commercial, and financial information networks, development agencies, and other entrepreneurs. Another project (*Information service for industry*) in Colombia will allow consulting engineers to visit small- and medium-scale enterprises to help meet their demands for information from local and international data bases, as well as that based on advice from researchers and experts.

Given the growth of urban areas, a project in Costa Rica (*Geographic information system for small municipalities*) will develop, adapt, and transfer a microcomputer-based geographic information system specializing in the construction and maintenance of municipal master plans. This is aimed at increasing the planning capacity and decision-making ability of small municipalities. Because of the prevalence of seismic disturbances in some countries, a regional project (*Seismic hazard*) will collect data on past seismic activities and estimate hazard potentials: this project is jointly supported with the Earth and Engineering Sciences Division.

A recently concluded evaluation examined the contribution of information projects supported by the Division in the Caribbean. It is assisting staff of the Division in identifying areas to consolidate experience and investments in the region and to work in priority areas identified as part of the regional information system strategy prepared for the Caribbean Development and Cooperation Committee, such as agriculture, industry, energy, trade, and tourism. Coordination at the national level is also important, and one project will permit Jamaica, which has developed a National

Information Network and System, to launch a sustained public education program to reach various parts of the community. The training of professionals who can meet current and future information needs is also a priority and will be addressed through a project at the University of the West Indies to establish a program for a *Master's degree in library studies* for the Caribbean region.

Asia

Basic survival issues, such as food security, shelter, and health delivery, continue to trouble this region. Social problems have increased the need for more work at the local level and greater community participation. This is reflected in efforts to decentralize planning and implementing programs, which are, in turn, mirrored by information systems. In addition, it is important to encourage the adaptation of technologies resulting from research and the development of "downstream" information systems that meet the needs of extension workers, farmers, and agricultural systems and that take into account indigenous knowledge and practices.

For example, Thailand's rural development policy calls for increasing decentralization of planning, monitoring, and evaluation to the provinces. A microcomputer-based provincial management information system has been established, but it was unfortunately based on a top-down approach. A project will now promote local-level planning and participation and two-way information flow and develop appropriate adaptations and enhancements to the system. Another project, in India, will build on village information centres that have been successful in conveying development information to rural people as part of an adult literacy campaign. The project will test a multimedia model involving a central information centre, a monthly newsletter, mobile audiovisual units, village-level data bases, and circulating libraries. For extension workers — a key link in the agricultural productive system — the second phase of a regional project (*Southeast Asian Weed Information Center*) will develop appropriate materials and tools (including both printed and microcomputer-based) to assist in the identification and management of weeds.

Information is crucial for better management. For example, it can help improve the focus in determining research priorities that respond to the needs of those involved in agricultural production. A project (*Agricultural research management information system*) in the Philippines will develop a prototype management information system to provide an information base for regional research

and development planning, monitoring, and evaluation of agricultural research.

Debt continues to be a priority concern of developing countries. The Commonwealth Secretariat, with IDRC's support, had developed a debt recording and management system (CS-DRMS) software package as a part of its advisory service to Commonwealth countries. A long-term objective, and one of IDRC's concerns, was to make the package readily available to non-Commonwealth countries. A project in Thailand will support the application of CS-DRMS so that the Ministry of Finance will be able to use the package for debt management and policy-planning activities.

Although the information community is relatively well organized in the region, effective, focused training in information management is still needed. A regional project (*Information management training series*) with three leading information and training centres will produce thoroughly assessed curricula and provide courses in abstracting and indexing, information packaging and consolidation, and library automation over 3 years. This local approach to training is proving very successful and will probably be introduced in other regions of the world.

Social Sciences

The Social Sciences Division has two primary functions: to support research on social and economic problems in the developing world so as to promote sustainable and equitable development, and to assist other divisions in IDRC to examine development problems from the perspective of the social sciences. The Division continues to target its efforts toward meeting the needs of those who are most at risk and whose choices are most limited: the urban and rural poor and women and children.

Priority topics for the Division include several of the world's most pressing concerns: economic deterioration and increasing inequality in the distribution of wealth, widespread decline in the quantity and quality of child and adult education, environmental degradation and resource depletion, uncontrollable growth of cities, continuing assaults on the viability of families through both high rates of maternal and infant mortality and rapid population growth, and the particularly disadvantaged status of women in both their productive and reproductive roles. The Division's support of research into the causes and effects of these problems is directed toward improving decision-making and policy and toward encouraging individuals and

communities to take greater control over their own development.

The Division has four programs: Economic Policy; Environmental Policy; Population, Education and Society; and Urban Development; and one unit for Gender and Development.

Africa

Social science researchers in Africa face a number of challenges in the era of debt crises and structural adjustment: environmental degradation and resource management, adolescent fertility, maternal and child mortality, migration, AIDS, the effectiveness and efficiency of educational services, and the management of rapidly growing cities are

but a few examples. Because many of Africa's countries are among the world's poorest, they have a very weak — and in some cases nonexistent — research infrastructure. Greater focus is placed on the development and refinement of cost-effective ways of doing research.

The *Small research grants* project enables the Organization for Social Science Research in Eastern Africa to increase the number of social scientists in the region by providing small grants for training and research. The project is supported jointly with the Ford Foundation.

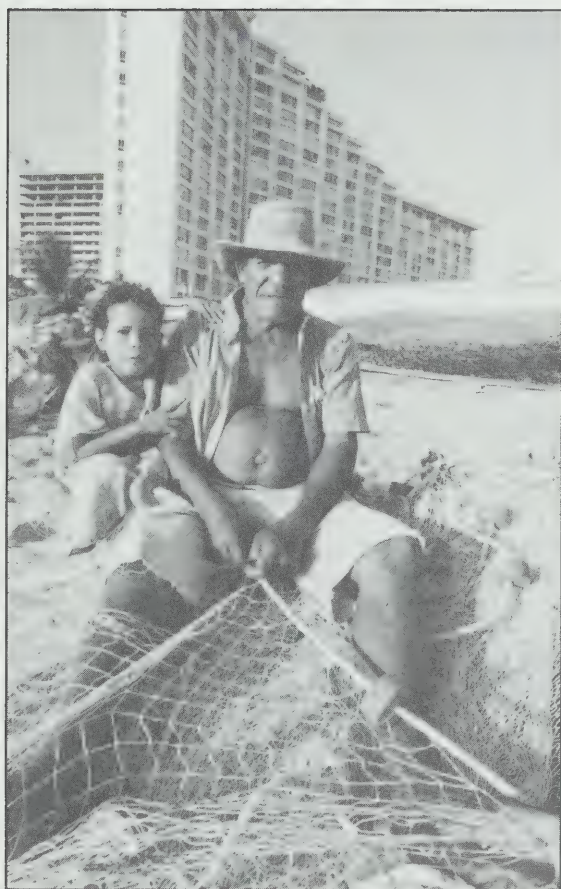
Four major networks of research are being supported or planned in West Africa on migration, adolescent fertility, and educational quality (*Education research network in West and Central Africa*) and on maternal mortality in an effort to identify critical issues and to recommend more appropriate policies and practices for the future.

Support for *Technology policy research networks* in eastern and southern Africa and in West Africa brings together a mix of economists, engineers, lawyers, and sociologists involved in policy research with policymakers to generate information to be used in the assessment of current technology policy and to design and implement new policies to harness technology for development.

Two urban projects are being supported in South Africa (*Conditions of life in the urban-migrant hostels of Cape Town and Migrant labour*) and a large network on local government issues involving Zimbabwe as well as South Africa (*Local government issues*). Urban planning and governance will be examined and compared with a view to assist in the transition to a postapartheid state.

A project will prepare a network focusing on the implications of economic reform for the environment in sub-Saharan Africa. Others seek to identify the impact of excessive use of pesticides as seen by those who work in the fields (*No dumping here: control of pesticides in developing countries*) or the potential for alternative financial and tenure arrangements that would reverse the trend toward desertification because of overgrazing on the steppes of the Maghreb in Algeria, Morocco, and Tunisia — *Pastoral systems of the Maghreb*. These projects all reflect a trend among environmental projects in Africa in that they are being undertaken, at least in part, by NGOs rather than exclusively by universities or governments.

Projects are being supported in various parts of Africa that examine women's access to land, including legal barriers to land ownership. Research



on this issue is being carried out in Ghana, Nigeria, Senegal, and Tanzania.

Latin America and the Caribbean

Development research takes place against a background of economic and financial crisis, characterized by crippling external debt that results in a net transfer of resources to the developed world, and of high population growth rate. It is the poorer strata of the population that are affected most if government spending in, for example, health and education is reduced. As the most urbanized region of the Third World, urban poverty is particularly critical in Latin America. Inflation, high and ever-increasing levels of unemployment, environmental deterioration, and the destabilizing effects of efforts to establish pluralistic political systems are topics for social science research. The region is well supplied with competent research institutions and researchers and the focus is to build on these resources through network projects, research consortia, and attempts to link research more closely with better policies and more effective practices.

In Mexico, a project to learn more about working mothers explores the impact of mothers' working conditions on their health and the health of their children. A group of projects in Chile (*Educational equality and democracy*), Colombia (*Alternatives in nonformal education for preschool children*), the Dominican Republic (*Alternative education for high-school graduates*), and Uruguay (*Education and work*) will identify alternative and innovative ways to increase the relevance of education to employment.

A regional project on *Export revenue management* will enable research institutions in three mineral-exporting countries in the Andean Region to identify the main channels through which revenue instability affects the domestic economy and to suggest means to mitigate the negative effects. The second-phase project on *Rethinking the Latin American city* synthesizes existing urban research in Latin America and develops a consolidated set of policy proposals on how governments and international agencies can more effectively address city problems in Latin America, emphasizing innovative and resource-efficient ways of improving urban living conditions, particularly those of the poor.

Accepted methods of calculating national accounts do not account for resource depletion and can, therefore, overstate gains from harvesting. An innovative project in Costa Rica (*Reforming the national income accounts in the fishery sector*) will

develop a method to allow for the decrease (or possibly the increase) in fishery stocks.

A project in Chile is examining the portrayal of women in television (*Social participation of women*). It will first identify the role of the medium in legitimizing and reinforcing negative images of women's participation in development. Focus will then shift to examine how the medium can help to raise the standards of living and social participation of women.

Asia

Asia covers a geographic area with an overwhelming range of diversity: from Western Samoa with a population of 200 000 to China with



one-quarter of the world's population; from Singapore with its high technology-oriented economy to Papua New Guinea with a mix of subsistence economy and a rudimentary market economy. In common with the other regions, rapid population growth coupled with the increasing pressure for economic growth lies behind a host of problems: inequalities of income, chronic malnutrition, growing unemployment, and lack of access to health services and education. The rate of industrial growth cannot absorb the population so that a large portion of the region's people cannot contribute to national growth. Health problems, particularly those associated with the proliferation of urban squatter settlements, which mark the rapid urban growth in the region, continue to hinder development. There is a growing awareness that environmental neglect destroys assets vital to any attempt at sustained development. The Division concentrates its efforts on the lower-income countries.

Support has been given for projects to link education to the search for lasting solutions to health problems. In Thailand, research into health education among marginal groups will focus on the high incidence of chronic diarrhea and malnutrition (*Integrated health intervention for childhood diarrhea and Integrated community nutrition*). Projects have been supported to increase the capability of researchers: in India, to address the problems of child survival (*Human development and family studies network*) and, in Indonesia, to use demographic data for local planning and family planning (*Strengthening population research capability*).

Two environmental projects, one on *Alternatives to cyanide use in the aquarium industry* in the Philippines and another to identify sustainable nonfarm employment in the Himalayas of Nepal (*Mountain off-farm employment*) focus on efforts to improve local income generation in ways that do not degrade the environment. Another project will seek ways to ensure that benefits from expansion of the park around Mount Everest flow, in part, to those now living and using the resources of the area to be protected (*Conservation and development of the Mount Everest ecosystem (China-Nepal)*).

Projects are supported on how to assist and manage the urban informal sector in Thailand and Sri Lanka, on unregulated housing in India, and on problems of uneven regional development in countries of the ASEAN group (Association of South East Asian Nations) and in China.

A project in China is examining women's

access to land in a historical and a contemporary context. Focusing on the 1948 land-reform policies, the project will examine the elimination of women's oppression, how the reform has affected familial relations and "women's work," and how legal equality in land rights stands to undermine centuries-old patriarchal ideologies and family structures.

Canada

The Division also supports links between Canadian and Third World researchers through IDRC's cooperative mechanism. A project is being supported under the leadership of the Dene Cultural Institute to establish links among groups collecting oral environmental history; a workshop will bring Dene and Inuit researchers from Canada together with researchers from Sahel countries and the Solomon Islands.

The Gender and Development Unit continues to place importance on training in gender analysis, both in Canada and in developing countries. Currently, it is supporting the Summer Institute in Gender and Development at Saint Mary's and Dalhousie universities in Halifax and the Atelier Femmes et Développement at Laval University.

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*Until December 1989, the Regional Office for Latin America and the Caribbean was in Bogotá, Colombia.

Financial commentary and highlights

During the fiscal year 1989–1990, the International Development Research Centre had to face the difficult task of revising its budget 2 months after the start of the fiscal year and after it had been approved by its Board of Governors. In May 1989, the federal government altered the percentage of Official Development Assistance (ODA) to gross national product (GNP) with the direct effect of lowering, for the first time, the annual grant to \$108.5 million from the 1988–1989 level, of \$114.2 million. The annual grant still represents 3.9% of the 1989–1990 gross commitment for ODA. For the 1990–1991 fiscal year, the grant allocated to the Centre has been increased to \$114.3 million.

During 1989–1990, the Centre carried on the freeze on the staff complement at the head office and adopted a series of cost-cutting recommendations aimed at enhancing the efficiency and effectiveness of its operations. The major recommendation the Centre had to consider and implement was the painful decision to down-size the Regional Offices in Cairo and New Delhi.

Revenue

Total Centre revenues were slightly below the 1988–1989 level and amounted to \$121.1 million. Revenues consist of the Parliamentary grant of \$108.5 million, investment and other income of \$3.3 million, and income for contract research of \$9.3 million. The contract research figure includes the cost of the V International Conference on AIDS (acquired immune deficiency syndrome). Figure 1 illustrates the trend in total revenue over the last 5 years.

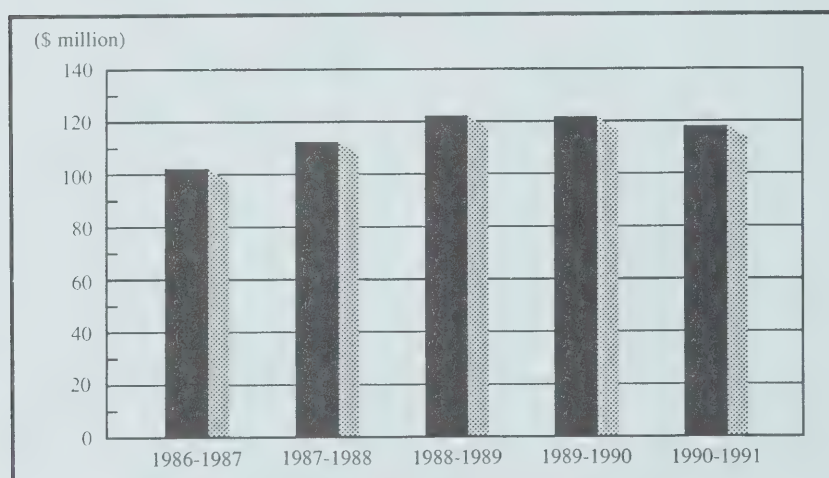


Figure 1. Total revenue for the Centre for 1986–1987 (actual) to 1990–1991 (budget).

The Parliamentary grant of \$108.5 for 1989–1990 was reduced by \$5.7 million compared to the 1988–1989 grant, a drop of 5.0%. The \$3.3 million of investment and other income in 1989–1990 topped the budgeted target of \$2.2 million. Investment income aggregated \$3.0 million compared to the budgeted \$2.0 million. The favourable variance is a result of a higher than expected investment portfolio during the whole year, and of higher rates of interest. Other income totaled \$0.3 million.

Contract research revenues reached a high of \$9.3 million in 1989–1990. This figure encompasses \$6.4 million received for the V International Conference on AIDS, organized by the Centre, from registration fees, the Canadian International Development Agency (CIDA), Health and Welfare Canada, and other donors. In addition, the Centre accepted \$2.9 million from CIDA for research conducted or managed by the Centre on its behalf.

For 1990–1991, total revenue of \$118.7 million is projected, a drop of 2.0% over 1989–1990.

Expenditure

Total Centre expenditures in 1989–1990 reached \$130.9 million. This amount represents an increase of \$14.9 million or 12.9% over the figure registered in 1988–1989. Figure 2 outlines the relative share of each category of expenditure for 1989–1990.

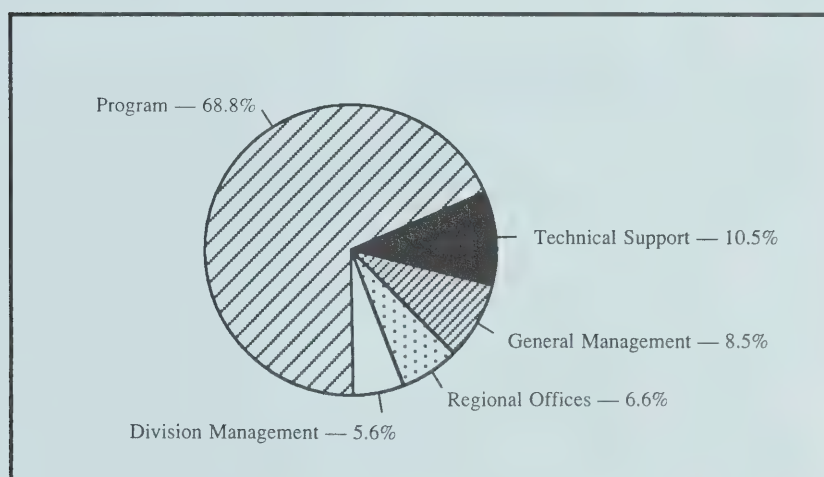


Figure 2. Breakdown of actual expenditures for 1989–1990.

The following table shows the 1990–1991 budget expenditures with actual expenditures reported for 1989–1990 and the previous 3 years (values are in millions of dollars).

	Budget		Actual							
	1990– 1991	% of total	1989– 1990	% of total	1988– 1989	% of total	1987– 1988	% of total	1986– 1987	% of total
Development research activities	\$ 68.7	57.5	\$ 78.5	60.0	\$ 67.9	58.5	\$ 62.4	58.6	\$ 60.4	59.8
Research-related activities	24.4	20.4	25.2	19.3	23.8	20.5	21.3	20.0	20.3	20.1
General management	11.5	9.6	11.1	8.5	9.9	8.5	10.4	9.8	9.4	9.3
Division management	7.6	6.4	7.4	5.6	7.2	6.2	6.5	6.0	5.5	5.4
Regional offices	7.3	6.1	8.7	6.6	7.2	6.2	5.8	5.5	5.4	5.3
Total	<u>\$119.5</u>	<u>100.0</u>	<u>\$130.9</u>	<u>100.0</u>	<u>\$116.0</u>	<u>100.0</u>	<u>\$106.4</u>	<u>100.0</u>	<u>\$101.0</u>	<u>100.0</u>

Development research activities

Development research activities indicate the direct costs of all scientific and technical research projects financed by the Centre in developing countries. It is the *raison d'être* of the Centre. This classification includes support for Centre projects and international research networks; projects that are identified, developed, and managed by developing-country researchers; and contract research projects that are administered on behalf of other donor organizations.

In 1989–1990, expenditures for development-research activities attained \$78.5 million or 60.0% of the Centre's total expenditures. Expenditures on existing projects that involve, for the most part, development research were higher than the 1988–1989 expenditures by 8.2%, whereas expenditures on new projects increased by 26.5% over the previous year.

This substantial increase in expenditure was anticipated and covered disbursements scheduled for 1988–1989 but which were released in this fiscal year. This, in turn, explains why the equity was unusually high at the end of the previous year.

Research-related activities

Expenditures for research-related activities totaled, in 1989–1990, \$25.2 million or 19.3% of the Centre's total expenditures. These activities include technical support, small projects that lead to the development of research projects, and activities relating to information dissemination or application of research results. This category of expenditure also includes a development-research library, which serves the Canadian development community as well as IDRC staff, and small projects that are supportive of ongoing programs of the Centre.

The technical support expenditures entail the cost of program personnel, whose role is to develop new projects, monitor ongoing research projects, and provide technical assistance to recipients. Expenditures for technical support in 1989–1990 reached \$13.7 million, representing 10.5% of total Centre expenditures, a slight decrease over 1988–1989.

For 1990–1991, technical support expenditures are planned at \$13.4 million, a decrease of 2.2% due to the cancellation of several positions and person-years and a reduction in all travel budgets. The share of this grouping of expenditure to total expenditure will increase to 11.2%.

Regional offices

The Centre will continue to maintain six regional offices to facilitate contacts with grant recipients and enhance the Centre's ability to respond to Third World issues. These offices are located in Egypt, India, Kenya, Senegal, Singapore, and Uruguay. The total expenditure incurred in 1989–1990 to operate these offices amounted to \$8.7 million, an increase of 21.6% over 1988–1989. This important increase is explained by the decision to move the Colombian office to Uruguay, and the cost associated with the down-sizing of the regional offices in Egypt and India. This category accounted for 6.6% of total Centre expenditures for 1989–1990.

For 1990–1991, regional office expenditures are budgeted at \$7.3 million, a decrease of 16% from the 1989–1990 level.

Division management

In 1989–1990, division management expenditures totaled \$7.4 million, a 2.3% increase over 1988–1989, and represented 5.6% of the total Centre expenditures for 1989–1990.

Expenditures for division management are anticipated to increase by 2.7% in fiscal year 1990–1991 to about \$7.6 million. This will slightly increase its share of total Centre expenditures from 5.6% in 1989–1990 to 6.4% in 1990–1991.

General management

To sustain its overall operations, the Centre requires policy, executive, administrative, and service functions. Within the context of IDRC, these functions are covered by the Board of Governors; the offices of the Executive, Secretary and General Counsel, Treasurer, and Human Resources; and the Administration, Electronic Data Processing, and Internal Audit departments.

General management expenditures reached \$11.1 million in 1989–1990, an increase of 12.5% over 1988–1989. Most of the increase is under the line items rent and utilities, salaries and benefits, and office and sundry expenses. This category of expenditure accounted for 8.5% of total Centre expenditures in 1989–1990, the same as in 1988–1989. The following table shows the comparative values.

	1990	1989
Salaries and benefits	\$ 6 505 670	\$6 117 923
Rent and utilities	1 806 255	1 546 887
Office and sundry	1 185 650	867 119
Depreciation and amortization	416 267	260 525
Professional and special services	366 521	283 168
Governors' meetings	308 621	279 395
Travel and relocation	248 310	279 704
Telecommunications	237 043	190 329
Insurance	41 281	43 338
Working group expenses	8 064	19 041
	<u>\$11 123 682</u>	<u>\$9 887 429</u>

For 1990–1991, the projected expenditures are set at \$11.5 million, an increase of 3.6% from the 1989–1990 level.

Equity of Canada

The equity level as at March 31, 1990 declined, as expected, to \$4.0 million from a high of \$13.9 million reported in the previous year. The low level of the year-end equity is due to the major reduction in the annual grant as already explained. For 1990–1991, the year-end equity is estimated at \$3.3 million.

Person-years

For 1989–1990, the Centre's head office-hired person-years totaled 435.3 compared to a budget of 459.5. Vacancies were reported primarily under technical support and resulted from delays in filling vacant positions. For 1990–1991, the number of head office-hired person-years is budgeted at 439.9 person-years.

Appropriations

Total Centre appropriations for 1989–1990 dropped to \$115.7 million compared to \$141.3 in 1988–1989, representing an 18.1% decrease over the previous year. This total includes new projects for \$74.7 million accounting for 64.6% of the total amount appropriated during the fiscal year. Figure 3 shows the allocation of program appropriations by geographic region.

For 1990–1991, total appropriations are projected to reach \$115.9 million with the program appropriations representing 64.7% of the total (\$75.0 million).

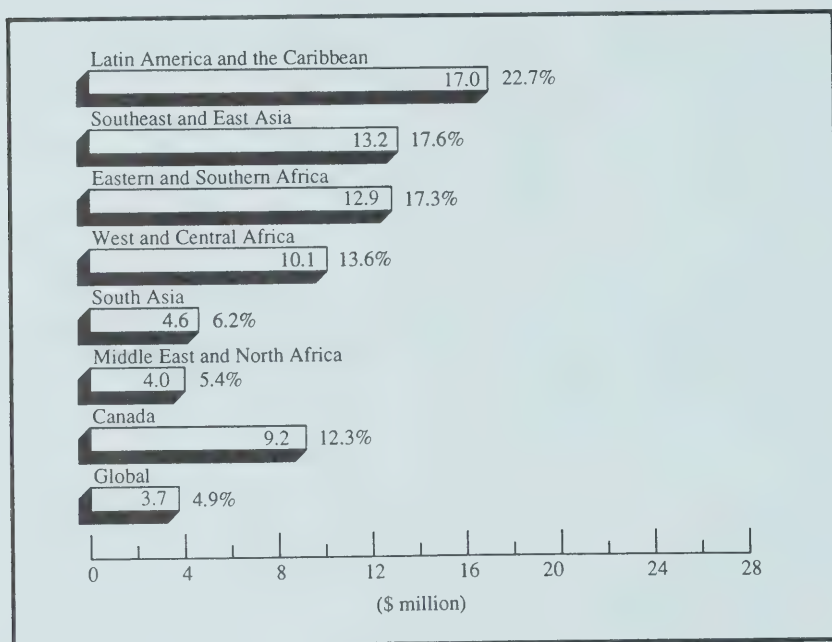


Figure 3. Actual appropriations for 1989–1990 by region.

Responsibility for financial statements

The financial statements have been prepared by management in accordance with generally accepted accounting principles appropriate in the circumstances. Management also assumes responsibility for all other information in the annual report, which is consistent, where applicable, with that contained in the financial statements. In support of its responsibility, management maintains financial and management control systems and practices to provide reasonable assurance as to the reliability of financial information, and that the assets are safeguarded and the operations are carried out effectively. The Centre has an internal audit department whose functions include reviewing internal controls and their application on an ongoing basis.

The Board of Governors is responsible for ensuring that management fulfills its responsibilities for financial reporting and internal control. The Board exercises its responsibilities through the Finance and Audit Committee whose members are not employees of the Centre. The Committee meets with management, the internal auditors, and the external auditors on a regular basis.

The Auditor General of Canada conducts an independent examination in accordance with generally accepted auditing standards and expresses his opinion on the financial statements. His examination includes appropriate tests and procedures to enable him to report whether the financial statements are presented fairly. The external auditors have full and free access to the Finance and Audit Committee of the Board.

Financial highlights (\$ 000)

	Budget 1989-1990	Actual 1989-1990	% variance from budget	Actual 1988-1989	1989-1990 vs 1988-1989 (% change)
FINANCIAL ACTIVITY					
Revenue	<u>\$112 900</u>	<u>\$121 083</u>	<u>7.2</u>	<u>\$121 293</u>	<u>-0.2</u>
Grant from Parliament of Canada	108 500	108 500	0.0	114 200	-5.0
Contract research	2 200	9 277	321.7	4 199	120.9
Investment and other income	2 200	3 306	50.3	2 894	14.2
Expenditure	<u>\$123 887</u>	<u>\$130 946</u>	<u>-5.7</u>	<u>\$115 975</u>	<u>12.9</u>
Existing projects*	59 820	54 450	9.0	50 309	8.2
New projects*	23 215	35 504	-52.9	28 060	26.5
Technical support	14 037	13 762	2.0	13 330	3.2
General management	11 682	11 124	4.8	9 887	12.5
Division management	7 672	7 378	3.8	7 212	2.3
Regional offices	7 461	8 728	-17.0	7 177	21.6
Excess of revenue over expenditure (expenditure over revenue)	<u>\$ (10 987)</u>	<u>\$ (9 863)</u>	<u>10.2</u>	<u>\$ 5 318</u>	<u>-285.5</u>
PROGRAM ACTIVITY					
Appropriations	<u>\$115 852</u>	<u>\$115 678</u>	<u>0.2</u>	<u>\$141 265</u>	<u>-18.1</u>
New projects	75 000	74 686	0.4	103 659	-28.0
Technical support	14 037	13 762	2.0	13 330	3.2
General management	11 682	11 124	4.8	9 887	12.5
Division management	7 672	7 378	3.8	7 212	2.3
Regional offices	7 461	8 728	-17.0	7 177	21.6
Commitments	<u>\$138 329</u>	<u>\$145 089</u>	<u>-4.9</u>	<u>\$126 834</u>	<u>14.4</u>
Projects	97 477	104 097	-6.8	89 228	16.7
Technical support	14 037	13 762	2.0	13 330	3.2
General management	11 682	11 124	4.8	9 887	12.5
Division management	7 672	7 378	3.8	7 212	2.3
Regional offices	7 461	8 728	-17.0	7 177	21.6

* Includes contract research and division activity projects.

Five-year financial review (\$ 000)

	Budget 1990-1991	Actual 1989-1990	Actual 1988-1989	Actual 1987-1988	Actual 1986-1987	Actual 1985-1986
RESULTS OF OPERATIONS						
Revenue	<u>\$118 700</u>	<u>\$121 083</u>	<u>\$121 293</u>	<u>\$112 417</u>	<u>\$102 401</u>	<u>\$ 89 663</u>
Grant from Parliament of Canada	114 300	108 500	114 200	108 100	100 000	86 000
Contract research	3 000	9 277	4 199	2 107	1 423	1 782
Investment and other income	1 400	3 306	2 894	2 210	978	1 881
Expenditure	<u>\$119 469</u>	<u>\$130 946</u>	<u>\$115 975</u>	<u>\$106 401</u>	<u>\$100 969</u>	<u>\$ 91 486</u>
Development research activities*	68 684	78 459	67 875	62 362	60 382	54 585
Research-related activities†	24 311	25 257	23 825	21 347	20 262	18 031
Research operational support†	14 921	16 106	14 388	12 329	10 971	10 155
General management	11 553	11 124	9 887	10 363	9 354	8 715
Excess of revenue over expenditure (expenditure over revenue)	<u>\$ (769)</u>	<u>\$ (9 863)</u>	<u>\$ 5 318</u>	<u>\$ 6 016</u>	<u>\$ 1 432</u>	<u>\$ (1 823)</u>
PROGRAM ACTIVITY						
Appropriations	<u>\$110 732</u>	<u>\$115 678</u>	<u>\$141 265</u>	<u>\$124 904</u>	<u>\$111 517</u>	<u>\$102 199</u>
New projects‡	70 900	74 686	103 659	89 685	79 351	72 301
Technical support†	13 359	13 762	13 330	12 527	11 841	11 027
General management	11 553	11 124	9 887	10 363	9 354	8 715
Division management†	7 583	7 378	7 212	6 501	5 577	5 209
Regional offices	7 337	8 728	7 177	5 828	5 394	4 947
Commitments	<u>\$112 481</u>	<u>\$145 089</u>	<u>\$126 834</u>	<u>\$120 154</u>	<u>\$105 099</u>	<u>\$ 95 383</u>
Projects**	72 649	104 097	89 228	84 935	72 933	65 485
Technical support†	13 359	13 762	13 330	12 527	11 841	11 027
General management	11 553	11 124	9 887	10 363	9 354	8 715
Division management†	7 538	7 378	7 212	6 501	5 577	5 209
Regional offices	7 337	8 728	7 177	5 828	5 394	4 947
Outstanding commitments	<u>\$121 582</u>	<u>\$116 100</u>	<u>\$104 400</u>	<u>\$ 96 000</u>	<u>\$ 88 343</u>	<u>\$ 88 900</u>

* Includes contract research.

† The values for 1988 and prior years have been reclassified to conform to the statement presentation adopted in 1989.

‡ Includes division activity projects.

** Excludes contract research (special projects).

Research and support expenses
for the year ended March 31, 1990

	1990			1989
	Development research activities	Research- related activities	Research operational support	Total
PROGRAMS				Total
Agriculture, Food and Nutrition Sciences	\$23 156 224	\$ 4 955 366	\$ 1 196 044	\$ 29 307 634
Social Sciences	11 047 244	3 575 909	1 356 232	15 979 385
Health Sciences	11 156 938	2 622 993	1 139 425	14 919 356
Information Sciences	9 861 439	2 482 440	1 314 526	13 658 405
Earth and Engineering Sciences	7 206 912	1 311 580	614 481	9 132 973
Fellowships and Awards	5 769 844	818 484	389 566	6 977 894
				\$ 28 181 425
				14 573 285
				12 700 074
				12 023 163
				8 941 883
				6 854 253
PROGRAM-RELATED ACTIVITIES				
Regional offices	77 944	1 242 540	8 728 412	10 048 907
Special program activities	8 886 377	914 648	0	9 801 025
Communication Division	1 270 467	5 022 913	969 731	7 263 111
Development-research library	0	1 765 694	0	1 765 694
External liaison and relations	25 472	544 503	398 414	968 389
				\$ 8 479 955
				5 712 180
				5 824 900
				1 722 497
				1 074 224
				\$106 087 839
				\$119 822 773
				\$16 106 831
				\$25 257 070
				\$78 458 872

Person-year levels

	1990-1991	1989-1990		1988-1989	
	Budget	Budget	Actual	Budget	Actual
PROGRAM DIVISIONS	<u>285.1</u>	<u>298.0</u>	<u>283.3</u>	<u>300.0</u>	<u>271.2</u>
Agriculture, Food and Nutrition Sciences	47.6	48.5	48.5	50.0	44.8
Social Sciences	44.0	48.0	43.3	48.5	43.3
Information Sciences	38.6	42.5	35.5	41.5	37.7
Project-related staff	36.4	36.5	39.4	37.5	33.5
Health Sciences	35.0	36.0	34.1	36.0	31.5
Communications	15.0*	26.0	24.3	25.5	22.5
Project-related staff	28.0*	19.0	18.3	19.0	17.4
Earth and Engineering Sciences	17.0	18.0	17.0	19.0	17.5
Office of Planning and Evaluation	12.0	12.0	11.3	11.0	11.4
Fellowships and Awards	11.5	11.5	11.6	12.0	11.6
 GENERAL MANAGEMENT	 <u>151.8</u>	 <u>158.5</u>	 <u>150.5</u>	 <u>161.5</u>	 <u>156.2</u>
Office of the Treasurer	37.8	39.0	35.5	39.0	37.7
Administration department	34.0	35.0	32.9	37.0	35.6
Office for Human Resources	17.5	19.5	18.0	19.5	21.7
Electronic Data Processing	16.0	14.0	15.4	14.0	13.4
Office of the Secretary and General Counsel	15.0	17.0	16.2	15.0	16.4
Executive Office	14.0	15.0	13.5	18.0	14.3
Regional offices administration	12.5	14.0	14.6	14.0	13.7
Internal Audit	5.0	5.0	4.4	5.0	3.4
 SECONDMENTS/SABBATICAL/ STUDY LEAVE	 <u>3.0</u>	 <u>3.0</u>	 <u>1.5</u>	 <u>5.0</u>	 <u>0.0</u>
 TOTAL: HEAD OFFICE-HIRED STAFF	 <u><u>439.9</u></u>	 <u><u>459.5</u></u>	 <u><u>435.3</u></u>	 <u><u>466.5</u></u>	 <u><u>427.4</u></u>

* Reflects Division's new structure.



AUDITOR GENERAL OF CANADA

VÉRIFICATEUR GÉNÉRAL DU CANADA

AUDITOR'S REPORT

To the International Development Research Centre
and the
Secretary of State for External Affairs

I have examined the balance sheet of the International Development Research Centre as at March 31, 1990 and the statements of operations, equity of Canada and changes in financial position for the year then ended. My examination was made in accordance with generally accepted auditing standards in Canada, conforming with International Auditing Guidelines, and accordingly included such tests and other procedures as I considered necessary in the circumstances.

In my opinion, these financial statements present fairly the financial position of the Centre as at March 31, 1990 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles in Canada, conforming with International Accounting Standards, applied on a basis consistent with that of the preceding year.

A handwritten signature in dark ink, appearing to read 'Kenneth M. Dye'.

Kenneth M. Dye, F.C.A.
Auditor General of Canada

Ottawa, Canada
June 1, 1990

Financial statements for the year ended March 31, 1990

Balance sheet as at March 31, 1990

	1990	1989
ASSETS		
Current		
Cash and short-term deposits (Note 3)	\$14 115 678	\$26 897 087
Accounts receivable	1 040 856	888 653
Prepaid expenses	849 248	1 394 660
	<u>16 005 782</u>	<u>29 180 400</u>
Recoverable deposits	206 894	183 430
Property and equipment (Note 4)	5 477 839	4 770 484
Endowment funds (Note 5)	433 475	165 441
	<u>6 118 208</u>	<u>5 119 355</u>
Total assets	<u><u>\$22 123 990</u></u>	<u><u>\$34 299 755</u></u>
LIABILITIES		
Current		
Accounts payable and accrued liabilities (Note 6)	\$11 303 825	\$12 373 696
Contract research (Note 7)	1 426 291	2 532 328
	<u>12 730 116</u>	<u>14 906 024</u>
Accrued employee separation benefits	2 623 128	2 722 679
Deferred rent – Head Office	2 311 918	2 616 835
Endowment funds (Note 5)	433 475	165 441
	<u>5 368 521</u>	<u>5 504 955</u>
Total liabilities	<u>18 098 637</u>	<u>20 410 979</u>
EQUITY	<u>4 025 353</u>	<u>13 888 776</u>
Total liabilities and equity	<u><u>\$22 123 990</u></u>	<u><u>\$34 299 755</u></u>

Approved:



President



Treasurer

Statement of operations
for the year ended March 31, 1990

	1990	1989
EXPENSES		
Development-research activities		
Project-grants	\$ 63 424 558	\$ 56 898 932
Centre-administered projects	5 757 433	6 777 332
Contract research (Note 7)	9 276 881	4 198 988
	<u>78 458 872</u>	<u>67 875 252</u>
Research-related activities		
Technical support	13 762 411	13 330 589
Program development support	6 683 451	6 382 458
Information dissemination	3 045 514	2 389 558
Development-research library	1 765 694	1 722 497
	<u>25 257 070</u>	<u>23 825 102</u>
Research operational support		
Regional offices	8 728 412	7 175 783
Division management	7 378 419	7 211 702
	<u>16 106 831</u>	<u>14 387 485</u>
Total research and support expenses	119 822 773	106 087 839
General management expenses	11 123 682	9 887 429
	<u>130 946 455</u>	<u>115 975 268</u>
REVENUE		
Grant from Parliament of Canada	108 500 000	114 200 000
Investment and other income	3 306 151	2 893 890
Contract research (Note 7)	9 276 881	4 198 988
	<u>121 083 032</u>	<u>121 292 878</u>
EXCESS OF EXPENSES OVER REVENUE	\$ 9 863 423	\$ (5 317 610)
(REVENUE OVER EXPENSES)	<u><u></u></u>	<u><u></u></u>

Statement of equity of Canada
for the year ended March 31, 1990

	1990	1989
Balance at the beginning of the year	\$13 888 776	\$ 8 571 166
Excess of expenses over revenue (revenue over expenses)	<u>9 863 423</u>	<u>(5 317 610)</u>
Balance at the end of the year	<u><u>\$ 4 025 353</u></u>	<u><u>\$13 888 776</u></u>

Statement of changes in financial position
for the year ended March 31, 1990

	1990	1989
Operating activities		
Cash used in (provided by) operations		
Excess of expenses over revenue (Revenue over expenses)	\$ 9 863 423	\$ (5 317 610)
Items not affecting cash		
Depreciation and amortization	(1 322 278)	(995 099)
Provision for employee separation benefits	(303 142)	(551 298)
(Loss)/gain on disposal of equipment	(28 508)	27 883
Amortization of deferred rent	<u>304 917</u>	<u>304 874</u>
	8 514 412	(6 531 250)
Changes in noncash operating assets and liabilities		
Accounts receivable	152 203	149 640
Prepaid expenses	(545 412)	421 094
Recoverable deposits	23 464	(14 291)
Accounts payable and accrued liabilities	1 069 871	(2 952 035)
Payment of employee separation benefits	402 693	370 338
Contract research liability	<u>1 106 037</u>	<u>(1 846 631)</u>
	2 208 856	(3 871 885)
Investing activities		
Additions to property and equipment	2 336 333	2 349 863
Proceeds on disposal of equipment	<u>(278 192)</u>	<u>(39 783)</u>
	2 058 141	2 310 080
Decrease (increase) in cash	12 781 409	(8 093 055)
Cash and short-term deposits at the beginning of the year	<u>26 897 087</u>	<u>18 804 032</u>
Cash and short-term deposits at the end of the year	<u><u>\$14 115 678</u></u>	<u><u>\$26 897 087</u></u>

Notes to financial statements as at March 31, 1990

1. Authority and objective

The International Development Research Centre, a Corporation without share capital, was established in 1970 by the Parliament of Canada through the International Development Research Centre Act. The annual grant received from the Parliament of Canada is pursuant to External Affairs Vote 50 for the years ended March 31, 1990 and 1989 respectively.

The objective of the Centre is to initiate, encourage, support, and conduct research into the problems of the developing regions of the world and into the means for applying and adapting scientific, technical, and other knowledge to the economic and social advancement of those regions.

2. Significant accounting policies

The financial statements have been prepared in accordance with Canadian generally accepted accounting principles, conforming with International Accounting Standards, and reflect the following significant accounting policies.

Property and equipment

Property and equipment are recorded at cost and depreciated over their estimated useful lives. Leasehold improvements are amortized over the terms of the respective leases. The methods and rates used to provide for the depreciation and amortization of property and equipment are:

	<u>Method</u>	<u>Rate (%)</u>
Computer equipment	Straight line	20
Leasehold improvements	Straight line	5-50
Office furniture and equipment	Diminishing balance	20
Vehicles	Diminishing balance	30
Telephone system	Straight line	20

Recognition of revenue

Parliamentary grants are recorded as revenue on an accrual basis.

Revenue in respect of contract research is recognized at the time the related project expenses are incurred. Contract research funds received in excess of expenses are included in current liabilities.

Accrued employee separation benefits

Employees are entitled to specified termination benefits, calculated at salary levels in effect at the time of separation as provided for by conditions of employment. The liability for these benefits is recorded as the benefits accrue to employees.

Deferred rent

Any rent-free period or other benefits associated with long-term leases are deferred and amortized over the term of the lease on a straight-line basis.

Pension costs

Employees are covered by the Public Service Superannuation Plan administered by the Government of Canada. Contributions to the Plan are required from the employees and the Centre. These contributions represent the total liability of the Centre and are recognized in the accounts on a current basis.

Income taxes

The Centre is exempt from any income taxes.

Foreign-currency translation

Foreign-currency transactions are translated into Canadian dollars by the use of an average exchange rate that closely approximates the rate in effect at the transaction date. Monetary assets and liabilities are adjusted to reflect the rate of exchange in effect at year-end. Exchange gains and losses are included in operations for the current year.

3. Cash and short-term deposits

	1990	1989
Cash (bank overdraft)	\$ (659 105)	\$ (179 966)
Short-term deposits		
Canadian chartered banks	11 648 255	25 114 133
Foreign-owned chartered banks	2 151 598	1 962 920
Federal and Provincial governments	974 930	—
	<u>\$14 115 678</u>	<u>\$26 897 087</u>

4. Property and equipment

	1990			1989
		Accumulated depreciation and amortization	Net	Net
	Cost			
Computer equipment	\$ 5 424 094	\$2 402 335	\$3 021 759	\$2 593 069
Office furniture and equipment	1 742 902	1 050 189	692 713	774 663
Leasehold improvements	1 365 142	376 525	988 617	496 299
Vehicles	1 275 473	638 702	636 771	742 632
Telephone system	852 347	714 368	137 979	163 821
	<u>\$10 659 958</u>	<u>\$5 182 119</u>	<u>\$5 477 839</u>	<u>\$4 770 484</u>

Depreciation and amortization for the year amounted to \$1 322 278 (1989, \$995 099).

5. Endowment funds

In 1987, the estate of the late John Bene established a fund to provide a postgraduate fellowship in the field of social forestry. During the same year, a former member of the Board of Governors of the Centre established a fund for applied or mission-oriented research. This year, the Centre received a contribution from the V International Conference on AIDS (acquired immune

deficiency syndrome), which was used to establish a fund for the purpose of AIDS research in the Third World.

	<u>1990</u>	<u>1989</u>
Balance at the beginning of the year	\$165 441	\$151 273
Donations received	255 958	5 000
Interest income	22 076	13 919
Expenses	<u>(10 000)</u>	<u>(4 751)</u>
Balance at the end of the year	<u>\$433 475</u>	<u>\$165 441</u>
John Bene	\$160 170	\$154 882
Governor	17 201	10 559
AIDS	<u>256 104</u>	<u>—</u>
Total endowment funds	<u>\$433 475</u>	<u>\$165 441</u>

6. Accounts payable and accrued liabilities

	<u>1990</u>	<u>1989</u>
Accrued liabilities – projects	\$ 6 983 667	\$ 7 278 920
Accrued annual and other leave benefits	1 390 149	1 221 879
Other	<u>2 930 009</u>	<u>3 872 897</u>
	<u>\$11 303 825</u>	<u>\$12 373 696</u>

7. Contract research

Contract research relates to research conducted or managed by the Centre on behalf of other organizations and to the V International Conference on AIDS organized by the Centre. These are funded by other international agencies, the Canadian International Development Agency (CIDA), other federal government entities, and registration fees.

Contract research expenses of \$9 276 881 (1989, \$4 198 988) include \$2 909 740 (1989, \$2 431 480) expended on behalf of CIDA. In addition, the Centre received \$49 971 (1989, \$24 511) as an administration fee from CIDA, which is included in investment and other income.

Contract research current liabilities of \$1 426 291 (1989, \$2 532 328) include \$1 043 422 (1989, \$608 257) held on behalf of CIDA.

8. Operating leases

The Centre has entered into various lease arrangements for office premises, equipment, and staff accommodation in Canada and in various countries. The total annual payments under such lease arrangements will be:

<u>Year ending March 31</u>	
1991	\$ 6 142 124
1992	5 150 099
1993	4 805 005
1994	4 625 239
1995	4 545 862
1996–Expiry	<u>\$12 122 893</u>
	<u>\$37 391 222</u>

9. Contractual commitments — project grants and program development

The Centre is committed to make payments up to \$116 097 000 during the next 4 years subject to funds being provided by Parliament and subject to compliance by recipients with the terms of project agreements. The Centre has also submitted formal grant offers to prospective recipients totaling \$18 739 003 and is awaiting acceptance of these offers.

10. Comparative figures

The 1989 figures have been reclassified to conform to the statement presentation adopted in 1990.

Projects for which funds were approved during fiscal year 1989–1990¹

Agriculture, Food and Nutrition Sciences²

89-0007 FSR methodological network (Latin America)

To enable the Grupo de Investigaciones Agrarias, Chile, to formalize and consolidate a network on methodology for farming systems research (FSR) to increase the efficiency of Latin American institutions in developing and transferring new appropriate technologies for small-scale farming systems. \$215 400 — 36 months.

89-0012 By-products (Nigeria) — Phase II

For Obafemi Awolowo University, Ile Ife, to enable the Department of Animal Science to develop sheep-feeding technologies based on agricultural wastes and test them on-farm. \$170 400 — 36 months.

89-0013 Rabbit production (Uganda)

For Makerere University, Kampala, to enable the Faculty of Agriculture and Forestry in the Department of Animal Science to introduce and evaluate improved rabbit-production technologies in smallholder farms so as to increase meat supplies and improve nutrition. \$130 100 — 36 months.

89-0014 Enabling grant to CARDI (Caribbean)

For the Caribbean Agricultural Research and Development Institute (CARDI), Trinidad, to contribute toward the core funding of CARDI to enable it to make the transition from the old to the new organizational structure. \$240 000 — 24 months.

89-0015 River fisheries (Senegal)

For l'Institut sénégalais de recherches agricoles, Dakar, to enable the Centre de recherches océanographiques de Dakar-Thiaroye to lay the necessary foundation for increasing fishing and fish farming in the Senegal River Basin. \$219 600 — 36 months.

89-0016 Cassava processing (Colombia) — Phase II

To enable the Centro Internacional de Agricultura Tropical, Cali, to determine the feasibility of establishing a cassava-flour agroindustry in a cassava-producing community by integrating production, processing, and marketing functions under real market conditions. \$210 500 — 24 months.

89-0017 Aquaculture development thrust (Latin America)

For the Fundación para la Educación Superior, Colombia, to enable the regional aquaculture network to contribute to aquaculture development by strengthening the research, planning, and training capacity of participating aquaculture centres. \$226 240 — 36 months.

89-0018 Soybean threshers (Nigeria)

For Obafemi Awolowo University, Ile Ife, to enable the Institute of Agricultural Research and Training to develop low-cost soybean-threshing machines suitable for use by small-scale farmers in Nigeria. \$191 500 — 36 months.

89-0019 Plantain conservation (Côte d'Ivoire)

For the Université d'Abidjan, to enable the Département de biochimie to improve traditional methods of plantain preservation to provide the population with more and better quality plantains. \$159 300 — 36 months.

89-0020 Farm forestry (Malawi)

For the Ministry of Agriculture, Lilongwe, to enable the Department of Agricultural Research to improve and stabilize the crop-, livestock-, and tree-production components of small-scale farming systems through the generation of suitable agroforestry technologies. \$216 495 — 36 months.

89-0021 Watershed management (Colombia)

For the Universidad Nacional de Colombia, Bogotá, to enable its faculty of agronomy to identify mechanisms to encourage small-scale farmers to introduce trees into various agricultural production systems and thereby improve soil conservation with reduced outside intervention. \$121 270 — 36 months.

89-0026 Technology adoption evaluation (Chile) — Phase II

To enable the Centro de Estudios para América Latina sobre Desarrollo Rural, Pobreza y Alimentación, Santiago, to contribute to the generation and dissemination of appropriate technology for small-scale farmers and to identify critical factors that influence the success of extension activities. \$199 400 — 36 months.

89-0036 Animal-production systems network (Latin America) — Phase II

For the Instituto Interamericano de Cooperación para la Agricultura, Costa Rica, to strengthen the research network of national, regional, and international organizations in Latin America for the generation and transfer of improved animal-production systems for small-scale farmers. \$557 220 — 36 months.

89-0038 Grain legumes (Nepal) — Phase II*

For the Ministry of Agriculture, Kathmandu, to enable the National Agricultural Research and Services Centre, to increase and sustain the production and productivity of grain legumes by strengthening the national grain-legume improvement program. \$268 540 — 36 months.

89-0039 Coffee berry borer (Mexico) — Phase II*

To enable the Centro de Investigaciones Ecológicas del Sureste, Tapachula, to consolidate and institutionalize a biological control program for the coffee berry borer. \$198 080 — 24 months.

89-0040 South American camelids (Peru) — Phase III*

For the Universidad Nacional Mayor de San Marcos, Lima, to enable the Instituto Veterinario de Investigaciones Tropicales y de Altura to develop improved alpaca-production systems for small-scale farms in the highlands. \$238 600 — 36 months.

89-0048 Invertebrates-seaweeds (Chile) — Phase III

For the Universidad Católica de Chile, Santiago, to enable the Facultad de Ciencias Biológicas to develop a pilot project on the transference of repopulation and management techniques for shellfish (mainly *loco* and sea urchin) at a

¹ An asterisk indicates that the contract between IDRC and the recipient may not yet have been signed.

² Projects funded jointly with another division are listed under "Multidivisional."

small-scale fishermen's cove in Caleta Quintay. \$67 270 — 20 months.

89-0049 Amazon piedmont systems (Peru)

For North Carolina State University Mission to Peru, Lima, to permit the Instituto Nacional de Investigación Agraria y Agroindustrial to identify three tree species with high growth rates so that local fruit, coffee, and cocoa farmers can benefit by using their sloping and low productivity lands to grow the wood needed for fruit boxes. \$25 960 — 12 months.

89-0051 Agroforestry (India)*

For the Indian Council of Agricultural Research, New Delhi, to enable the National Research Centre in Agroforestry and the Indian Grassland and Fodder Research Institute to develop and test agroforestry technologies to increase the productivity and sustainability of farming systems with a view to improving the livelihood of the inhabitants of the Bundelkhand region. \$370 000 — 60 months.

89-0052 Multipurpose-tree tissue culture (Africa)

To enable the International Livestock Centre for Africa, Ethiopia, to develop in vitro systems for African *Acacia* and *Erythrina* species and to train technicians in in vitro technology. \$82 450 — 24 months.

89-0058 Vegetable oil-protein system (Kenya) — Phase III
For Egerton University, Njoro, to develop an integrated research and development program on the vegetable oil-protein system aimed at removing constraints to domestic oilseed production and to processing and using edible oils and protein cakes. \$698 400 — 36 months.

89-0062 Asian Fish Health Network (Asia)

To enable the Agriculture, Food and Nutrition Sciences Division, IDRC, Singapore, to continue the development of the Asian Fish Health Network and several proposed Centre-supported projects in fish health by providing the services of a scientific coordinator. \$124 700 — 18 months.

89-0065 Marine larvae production (Latin America)

To enable the Universidad del Norte — Centro Coquimbo, Chile, to contribute to training and exchange of experiences between researchers and technologists to develop the larvae production and the culture of

marine species, particularly filtrator molluscs. \$100 000 — 24 months.

89-0066 Chachafruto (Colombia) — Phase II

To enable the Corporación Nacional de Investigación y Fomento Forestal, Bogotá, to increase the productivity of alternative sources of vegetable protein in the Andes by promoting the cultivation of chachafruto (*Erythrina edulis*) within agrosilvopastoral systems. \$83 700 — 36 months.

89-0067 Network coordinator (southern Africa) — Phase II

To enable the Agriculture, Food and Nutrition Sciences Division, IDRC, Nairobi, to establish a network to provide support, effective liaison and coordination, and technical guidance to researchers. \$73 805 — 24 months.

89-0068 Fuelwood plantations (Botswana) — Phase II

For the Forestry Association of Botswana, Gaborone, to identify suitable tree species and reliable establishment and management practices to provide fuelwood and other benefits for rural communities and individuals in the semi-arid areas of eastern Botswana. \$334 100 — 36 months.

89-0071 Agroforestry seed clearing house (the Philippines)

For the University of the Philippines, Los Baños, to enable the Department of Agronomy to promote a continuous supply of good quality seed material to organizations (both governmental and nongovernmental) involved in uplands development activities, and to develop local capabilities in seed production and distribution technologies. \$16 290 — 15 months.

89-0094 New lands water survey (Egypt)

For the American University of Cairo to enable the Desert Development Center to document and evaluate available information on the technical, economic, and social aspects of water use in the reclaimed lands, with specific emphasis in South Tahrir. \$17 750 — 3 months.

89-0109 Root-crops network (eastern and southern Africa) — Phase II

For the International Institute of Tropical Agriculture, Nigeria, to strengthen the capacity of participating national programs to meet the research needs of their root-crops programs and those of the region through staff development and

other direct support. \$441 000 — 36 months.

89-0113 Nitrogen-fixing trees (Central America) — Phase III

For the Centro Agronómico Tropical de Investigación y Enseñanza, Costa Rica, to develop improved planting stock, cultural, and management techniques for leguminous tree species of the genera *Erythrina*, *Glyricidia*, and *Inga*, and to promote their incorporation in agroforestry systems on small-scale farms in the humid tropics of Central America. \$555 000 — 36 months.

89-0114 Silvopastoral systems (Costa Rica) — Phase II

For the Centro Agronómico Tropical de Investigación y Enseñanza, Turrialba, to develop sustainable agricultural production systems suitable for small-scale farmers in the Atlantic region of Costa Rica to increase land productivity and farm income. \$420 500 — 36 months.

89-0115 Guinea pig-production systems (Peru) — Phase II*

For the Instituto Nacional de Investigación Agraria y Agroindustrial, Lima, to develop appropriate technologies for improving the production of guinea pigs, an important source of protein for low-income families. \$321 000 — 36 months.

89-0119 Rural food processing (Colombia) — Phase III

For the Fundación para la Aplicación y Enseñanza de las Ciencias, Cali, to research and promote the establishment of small-scale food-processing plants in rural areas in North Cauca and Valle regions. \$375 400 — 36 months.

89-0122 Farming systems (Ethiopia) — Phase II*

For the Institute of Agricultural Research, Addis Ababa, to strengthen the capacity of its scientists, particularly in the Department of Agricultural Economics and Farming Systems Research, to diagnose and alleviate constraints faced by farmers by designing, carrying out, and extending on-farm and on-station research. \$225 200 — 36 months.

89-0131 Banana postharvest technology (the Philippines)

For the University of the Philippines, Los Baños, to enable the Postharvest Horticulture Training and Research Center to improve methods of transporting and handling Saba bananas intended for domestic markets with a view to reducing

traders' losses, eliminating price discounts to farmers, and encouraging farmers to increase production. \$81 600 — 36 months.

89-0139 Tree-crop processing (Peru)

To enable the Instituto Nacional de Investigación Agraria y Agroindustrial, Lima, to identify the most suitable varieties of peach palm for cultivation and processing in the Peruvian Amazon. \$199 100 — 36 months.

89-0140 Fisheries training seminar (Latin America)

For the Programa de Asistencia y Investigación Social, Chile, to provide a theoretical and practical background on the application of the concept of integrated coastal development to fieldworkers involved in extension activities for artisanal fisheries at the community level. \$78 560 — 12 months.

89-0141 Fisheries development (Chile) — Phase II

For the Universidad Católica de Chile, Talcahuano, to enable the Departamento de Biología y Tecnología del Mar to expand and complete the establishment of a pilot development program for artisanal fisheries within the integrated coastal-development thrust. \$125 320 — 18 months.

89-0151 Agroforestry systems (Cameroon)

To enable the International Council for Research in Agroforestry, Kenya, in collaboration with the Institute of Agronomic Research, Njombe, to develop ecologically and socioeconomically viable agroforestry technologies for increased and sustainable crop- and animal-production systems for small-scale farmers in the lowland humid tropics of Cameroon and West Africa. \$214 250 — 24 months.

89-0153 Tsetse fly targets (Kenya)

To enable the Kenya Trypanosomiasis Research Institute, Kikuyu, to field test delta methrin-impregnated, odour-baited targets for tsetse control. \$113 070 — 24 months.

89-0157 Integrated coastal development (Latin America)

To enable the Centro Peruano de Estudios para el Ecodesarrollo Marino, Lima, to coordinate and support research and development activities for artisanal fisheries undertaken as part of the integrated coastal-development thrust in Brazil,

Chile, Colombia, and Peru. \$74 950 — 9 months.

89-0158 Fish parasites (Malaysia) — Phase III

For the Universiti Pertanian Malaysia, Serdang, to enable the Faculty of Fisheries and Marine Sciences to study the mechanisms of host-parasite relationships, to develop models for prophylaxis and treatment of fish diseases, and to establish baseline data on fish viruses with a view to increasing the production of freshwater fish. \$210 000 — 36 months.

89-0162 Latin American Banana Network

To provide the International Network for the Improvement of Banana and Plantain, France, with a fund from which small grants can be made to individuals and institutions in Latin America and the Caribbean to stimulate new and increased levels of research on bananas and plantains. \$50 000 — 13 months.

89-0166 Small-scale fish systems (Kenya)*

To enable the University of Nairobi to improve the earnings of rural women fish traders by introducing them to improved methods of handling, marketing, and processing Nile perch (*Lates niloticus*) and omena (*Engraulicypris* sp.). \$201 500 — 36 months.

89-0172 Sorghum and millet food-feed system (Kenya)

For the University of Nairobi to promote the production of drought-resistant sorghum and millet cereals on arid and semi-arid lands by linking existing applied research, implementing research results, formulating policy, and encouraging additional research. \$189 000 — 36 months.

89-0181 Rice farming systems (Bhutan) — Phase II*

For the International Rice Research Institute, the Philippines, to develop the capability of Department of Agriculture staff at Thimphu, Bhutan, to undertake rice-based farming-systems research. \$418 490 — 45 months.

89-0188 Duck feeding systems (Indonesia) — Phase II*

For the University of Brawijaya, Malang, to enable the Faculty of Animal Husbandry to improve duck feeding systems and productivity using indigenous feeds. \$66 360 — 36 months.

89-0189 Upland agriculture (the Philippines)

For the Visayas State College of Agriculture, Baybay, to enable the Farming and Resource Management Institute to improve the productivity, income, and sustainability of farm households in the uplands of eastern Visayas. \$92 310 — 24 months.

89-0191 Alternative production systems (Colombia) — Phase IV

To enable the Fundación para la Aplicación y Enseñanza de las Ciencias, Cali, to complete and document the long-term trials in soil management and sustainable production that were begun in the previous phases and to consolidate its role as a rural university. \$243 000 — 36 months.

89-0200 Sesame and finger millet biotechnology (India)*

For Tamil Nadu Agricultural University, Coimbatore, to enable the School of Genetics to increase the yields and improve the quality of sesame (*Sesamum indicum*) and finger millet (*Eleusine coracana*) through cell- and tissue-culture techniques. \$168 410 — 36 months.

89-0202 WAFSRN (West Africa) — Phase II

For the Semi-Arid Food Grain Research and Development Project, Burkina Faso, to enable the West African Farming Systems Research Network (WAFSRN) to strengthen and support national programs through training, promoting dialogue among researchers, and improving access to information. \$551 035 — 36 months.

89-0204 Fruit trees (Thailand)

For Chiang Mai University to enable the Faculty of Agriculture to develop and promote management techniques for incorporating mango trees in intercropping systems for small farms in northern Thailand. \$149 580 — 36 months.

89-0215 Small dams (Côte d'Ivoire)*

For the Ministère de la recherche scientifique et de la culture, Abidjan, to enable the Institut des savanes, the Institut d'écologie tropicale, and the Centre ivoirien des recherches économiques et sociales to improve the production of microfisheries in small- and medium-sized reservoirs to offer more employment, revenues, and protein-rich foods to the rural and small-town populations in northern Côte d'Ivoire. \$355 670 — 36 months.

89-0219 Fish genetics (Thailand) — Phase III

For the Ministry of Agriculture and Cooperatives, Bangkok, to enable the National Aquaculture Genetics Institute to develop truly domesticated strains of tilapia (*Oreochromis* sp.), catfish (*Clarias* sp.), common carp (*Cyprinus carpio*), giant freshwater prawn (*Machrobrachium rosenbergii*), and seabass (*Lates calceifer*) for superior yields in artisanal aquaculture; to introduce these strains to Thai farmers; to train Thai researchers in relevant research methods; and to strengthen the Institute. \$247 935 — 36 months.

89-0223 Groundnut shellers (Senegal)*

For the Centre national de recherches agronomiques de Bambey to facilitate the production of adequate quantities of seeds of good quality by field-testing a groundnut sheller in the rural areas and studying its technical and socioeconomic aspects. \$55 300 — 36 months.

89-0228 Bamboo mat board (India)

For the Indian Plywood Industries Research Institute, Bangalore, to develop appropriate technologies for producing good-quality, low-priced bamboo mat boards to increase the income of bamboo mat workers (mostly tribal women) while reducing dependence on imported wood for plywood production. \$145 150 — 36 months.

89-0231 Oilseed processing (Kenya)

To enable Egerton University, Njoro, to promote maximum use of oilseeds by adapting, testing, and introducing suitable, small-scale oilseed-processing equipment and by developing a process for its effective incorporation in rural enterprises. \$193 200 — 36 months.

89-0238 Food legumes (Burkina Faso) — Phase IV*

For the Ministère de l'enseignement supérieur et de la recherche scientifique, Ouagadougou, to enable the Institut national d'études et de recherches agricoles to develop high-yielding, disease-resistant cowpea cultivars that are adaptable enough to produce well during the wet years and sustain minimal losses during the dry years in the semi-arid zones. \$275 915 — 36 months.

89-0239 Fish nutrition (China)

To enable Zhongshan University, Guangzhou, to develop practical diets

for use in the culture of grass carp in China, as well as elsewhere in developing countries in Asia, using readily available, low-cost agricultural by-products. \$172 500 — 36 months.

89-0249 Soil fertility (Uganda)

To enable Makerere University, Kampala, to gain a better understanding of the role of soil fauna in soil fertility so as to develop improved soil-management options for Uganda farmers. \$40 400 — 24 months.

89-0253 Banana and plantain network — INIBAP (Global) — Phase VI

To enable IDRC, Ottawa, to continue support for the establishment and operations of the International Network for the Improvement of Banana and Plantain (INIBAP). \$200 000 — 12 months.

89-0259 Fish genetics (the Philippines) — Phase II

To enable the Freshwater Aquaculture Center, Central Luzon State University, Nueva Ecija, to develop selection procedures suitable for small- to moderate-scale production of improved fish stock and to develop lines of tilapia with superior growth performance for distribution to farmers. \$115 000 — 36 months.

89-0271 Soybean utilization (Nigeria-Ghana) — Phase II

For the International Institute of Tropical Agriculture, Ibadan, to develop and encourage appropriate technologies for soybean use for rural and urban households and small-scale processing enterprises to stimulate increased production and benefit the population. \$403 200 — 36 months.

89-0279 Local organizations support (West Africa)*

For Development Innovations and Networks, Switzerland, to strengthen the ability of local organizations involved in rural development to meet the needs of their members and to improve the institutional environment in which they function. \$349 418 — 24 months.

89-0292 Aflatoxin in maize (the Philippines) — Phase II*

To enable the National Post Harvest Institute for Research and Extension, Manila, to determine the effectiveness of prescribed farm-level postproduction practices in controlling aflatoxin contamination and the acceptability and economic implications of such practices to farmers. \$170 300 — 34 months.

89-0308 Bananas (the Philippines) — Phase III*

For the Philippine Council for Agriculture and Resources Research and Development, Los Baños, to enable the University of the Philippines to work toward overcoming the biological and socioeconomic constraints to small-scale banana production and to exchange information, research results, and germ plasm with other members of the international community of banana researchers. \$242 220 — 36 months.

89-0314 Mineralization and nutrient recycling (Costa Rica)*

To enable the Asociación Bananera Nacional, San José, to better understand the process by which banana crop residues are broken down and their essential nutrients released for use by a new crop. Researchers will identify the microorganisms involved and the factors affecting their activity. \$146 570 — 36 months.

89-0315 Inga (Peru) — Phase II

To enable the Instituto Nacional de Investigación Agraria y Agroindustrial, Lima, to explore the potential of *Inga* tree species as components of agroforestry technologies for a range of soil types and climatic conditions in the humid tropics. \$100 000 — 12 months.

89-0318 Integrated pest management (Egypt)*

For the University of Alexandria to enable its faculty of agriculture in collaboration with the University of Assiut and the Ministry of Agriculture to develop and evaluate an integrated pest-management system for maize that would reduce pesticide use, decrease damage to health and the environment, and raise the income of maize farmers. \$210 410 — 48 months.

89-0323 Biological pest management (India) — Phase III*

To enable the University of Nagpur, Maharashtra, to develop commercial in vitro production of *Nosema locustae*, a biological agent for controlling grasshoppers and locusts, and appropriate management strategies. \$78 040 — 36 months.

89-0333 On-farm testing (Ecuador) — Phase II*

To enable the Fundación para el Desarrollo Agropecuario, Quito, to increase the production and productivity of small-scale farming systems for maize, beans, and wheat in Bolivar Province using research

results from institutions in the region. \$118 800 — 24 months.

89-0342 National Aquaculture Network (Colombia)*

To enable the Fondo Colombiano de Investigaciones Científicas y Proyectos Especiales Francisco José de Caldas, Bogotá, to contribute to freshwater and marine aquaculture development by reinforcing the national aquaculture network's efforts to coordinate the activities of the 40 institutions involved in aquaculture. \$50 000 — 12 months.

89-0343 Mollusc culture (Indonesia) — Phase II*

For the Central Research Institute for Fisheries, Jakarta, to enable the Research Institute for Coastal Aquaculture to increase shellfish production and marketability, thereby providing coastal peoples with increased possibilities for employment and income. \$54 030 — 24 months.

89-0345 Biological control (China) — Phase II*

To enable the Chinese Academy of Agricultural Sciences, Beijing, to perfect and reduce the cost of commercial production of various species of *Trichogramma*, a parasite that attacks the eggs of insect pests, and to extend the area of application of this form of biological pest control. \$55 500 — 36 months.

89-1016 Acacia root symbiosis (Tunisia–Canada) — Phase II

To enable the Institut national de recherches forestières, Tunis, and Laval University, Quebec, to increase the productivity of *Acacia cyanophylla* through rhizobium, endomycorrhizal fungi, and clonal selection. \$222 550 — 36 months.

89-1021 Aquaculture Genetics Network (Asia–Canada) — Phase II

For Dalhousie University, Nova Scotia, to coordinate the Aquaculture Genetics Network in Asia and to develop new measurement procedures, genetic models, selection protocols, and basic biological knowledge in support of the network. \$482 800 — 36 months.

89-1024 Trifolium rhizobia (sub-Saharan Africa–Canada) — Phase II

For the International Livestock Centre for Africa, Ethiopia, and the University of British Columbia, Vancouver, to develop appropriate *Rhizobium* inoculants for perennial African clovers. \$190 700 — 36 months.

89-1036 Passive crop dryer (Indonesia–Canada)

To enable Bogor Agricultural University and the University of Moncton, New Brunswick, to provide farmers' groups with an efficient, passive drying system to store their harvest or to produce dried products for market. \$232 600 — 24 months.

Communications³

89-0003 Bakery improvements dissemination (Chile)

To enable the Federación Gremial Chilena de Industriales Panaderos, Santiago, to promote the dissemination and transfer of improved bakery technologies. \$30 122 — 20 months.

89-0004 Training modules in community participation (Costa Rica)

To enable the Fundación Tecnológica de Costa Rica, Cartago, to collect operationally useful information on the social and management aspects of community participation and incorporate it into a set of training video modules for use by nongovernmental organizations and communities involved in technology-introduction projects in Latin America. \$90 710 — 12 months.

89-0006 Promotion of beekeeping (Malaysia)

To enable the Universiti Pertanian Malaysia, Serdang, to disseminate the results of the Universiti-IDRC research projects on beekeeping to poor rural communities. \$100 695 — 36 months.

89-0063 Improving communication between research institutes and extension services (Africa)

To enable the African Association of Science Editors, Kenya, to conduct a series of training workshops for publication officers and editors from research institutions and for extension workers in eastern, southern, and western Africa on effective communication of research results to users and beneficiaries. \$153 495 — 24 months.

89-0064 Summative evaluation of *Prescription for Health* (the Philippines)

To enable the Kabalikang Pamilyang Pilipino Foundation, Makati, to formulate recommendations for the development,

distribution, and use of a health-social promotional film based on the Centre's experience with the film *Prescription for Health*. \$22 408 — 6 months.

89-0092 Directory of scholarly publishers (Latin America)

To enable the Centro Regional para el Fomento del Libro en América Latina y el Caribe, Colombia, to help increase cooperation, exchange, and links among the scholarly publishers of the region; to promote scholarly production at the higher education centres of the region in view of the new possibilities opened by the Asociación de Editoriales Universitarias de América Latina y el Caribe; and to stimulate further dissemination and use of this production both within and outside the region. \$19 520 — 12 months.

89-0093 Latin American scholarly coeditions program

To enable the Centro Regional para el Fomento del Libro en América Latina y el Caribe (CERLALC), Colombia, to sponsor the launching of a coedition program for the production, dissemination, and distribution of scholarly texts, books, and manuals between CERLALC and the Asociación de Editoriales Universitarias de América Latina y el Caribe that will serve as a model for future endeavours; to stimulate intellectual production among the academic staff in the higher education centres of the region; and to identify texts, books, and manuals with potential for use in higher education in the region. \$19 337 — 15 months.

89-0108 Women's radio (the Philippines)

For the University of the Philippines, Los Baños, to enable the Institute of Development Communication, College of Agriculture, to train 20 women in development broadcasting activities and evaluate the impact of such activities on their respective villages. \$43 957 — 24 months.

89-0110 "North–South" television series (Canada) — Phase II

To enable Metavidea Associates Inc., Quebec, to continue producing the successful television series "North–South" with IDRC as the major sponsor. \$217 270 — 12 months.

89-0133 Promotion of jab-seeder (Thailand)

To enable the Ministry of Agriculture and Cooperatives, Bangkok, in collaboration with the Asian Institute of Technology (AIT), to introduce

³ Projects funded jointly with another division are listed under "Multidivisional."

and promote the use and fabrication of the AIT-IDRC soybean jab-seeder by farmers, farm-machinery manufacturers, and agricultural extension staff in northeastern Thailand. \$49 120 — 12 months.

89-0134 Participatory development communication (the Philippines)

For Silliman University, Dumaguete City, to enable the School of Communication to strengthen the Silliman University Research Action Program in the Uplands through systematic planning, implementation, and evaluation of development communication activities. \$47 190 — 36 months.

89-0164 Communication and technology transfer (Latin America)

To enable the Centro Internacional de Agricultura Tropical, Colombia, to improve the transfer of agricultural research results and technologies to agricultural producers, particularly low-resource farmers, and thus increase their productivity and income and contribute to economic development. \$16 543 — 12 months.

89-0165 STD and AIDS prevention for adolescents (Colombia)

To enable the Comité Regional de Educación Sexual para América Latina y el Caribe, Bogotá, to produce an educational video aimed at creating awareness of the need to prevent sexually transmitted diseases (STD) and AIDS with the participation of the target adolescent population. \$13 020 — 6 months.

89-0208 Traditional media (Malaysia-India)

To enable the Asian Mass Communication Research and Information Centre, Singapore, to complete research into the efficacy of integrating traditional media and mass media in communicating environment-related messages from governmental and nongovernmental organizations. \$39 650 — 24 months.

89-0214 Radio-program evaluation (Peru)

To enable the Asociación de Comunicadores Sociales, Lima, to evaluate the radio program "Nuestra Vida" (Our Life) addressed primarily to low-income women, so as to determine how it is perceived and used by the intended audience after 5 years of existence. \$6 012 — 6 months.

89-0237 Dissemination of research results (Togo)

To enable the Association togolaise de la recherche scientifique, Lomé, to make research institutions more aware of their potential role in the transfer of scientific and technical knowledge and to improve communication between the institutions and their users—beneficiaries. \$29 936 — 6 months.

89-0250 Science popularization (Nepal) — Phase II*

To enable the Royal Nepal Academy of Science and Technology, Kathmandu, to help isolated mountain communities become more aware of, and thereby more likely to benefit from, the application of science and technology through the use of communications tools developed to suit the communities' particular needs. \$120 072 — 24 months.

89-0282 Audience research — Channel 11 (Thailand)*

For the Centre for Educational Technology, Bangkok, to carry out audience research among viewers of Thailand's Channel 11 to develop a viewers' profile, to evaluate the effectiveness and relevance of current educational programming, and to identify the information needs and information-seeking behaviour of viewers. \$75 846 — 36 months.

89-0283 Community-based evaluation of water quality in Kibwezi (Kenya)*

For the African Medical and Research Foundation (AMREF), Nairobi, to encourage the use of qualitative community-based evaluation techniques in water-supply and sanitation projects by disseminating information on the design, adaptation, and implementation of the World Health Organization's Minimum Evaluation Procedures based on the experience of AMREF's Kibwezi water-supply project. \$17 038 — 12 months.

89-0284 Science and technology features service (Kenya) — Phase III*

For the Africa Church Information Service, Nairobi, to allow the All Africa Press Services to continue and to improve its science and technology feature service in both English and vernacular languages for a further 2 years. \$42 853 — 24 months.

89-1045 Communication strategies in applied scientific and technical research (Thailand-Canada)*

To enable Mahidol University, Bangkok, and McGill University,

Quebec, to examine the communications strategies of research and development institutions with a view to improving linkages between such institutions and the users of technical research. \$41 586 — 12 months.

Earth and Engineering Sciences⁴

89-0053 Tar sands (Nigeria)

For the University of Benin, Benin City, to enable its Department of Civil Engineering to develop a technology for effectively using tar sands to produce asphaltic concrete for constructing and rehabilitating roads. \$205 400 — 36 months.

89-0074 Estuarine waters (Senegal)*

For the Université Cheikh Anta Diop, Dakar, to enable the Department of Geology to acquire a better understanding of the hydrochemistry of the estuary of the Senegal River and to locate the most environmentally disturbed zones between Guiers Lake and the mouth of the river to propose water-management solutions for that portion of the river. \$23 989 — 18 months.

89-0075 Inedible vegetable oils (Burkina Faso)

For the Centre national de la recherche scientifique et technologique, Ouagadougou, to enable the Institut burkinabé de l'énergie to propose efficient techniques to add value, in a decentralized fashion, to inedible vegetable oils to meet the production needs of maintenance products. \$32 155 — 18 months.

89-0280 Control of manual lathes with microprocessor (Thailand)

For Chiang Mai University to develop a low-cost system for equipping existing manual lathes with numerical control, thus enhancing the production capability of small enterprises and enabling them to support an expanding industry. \$110 400 — 24 months.

89-0287 Low-cost housing (the Philippines)

To enable the Capiz Research, Extension and Development Consortium, Roxas City, to carry out, in collaboration with the University of the Philippines and the National University of Singapore, research activities into the construction of

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socially acceptable and affordable typhoon-resistant, low-cost houses in Capiz Province with locally available materials. The community will participate in the planning, design, construction, and financing of the housing. \$129 930 — 24 months.

89-0293 Mangrove salt (Guinea)*
To enable the Direction nationale de la recherche scientifique, Conakry, to improve the traditional salt-extraction technique used in Lower Guinea by farmers for whom salt production constitutes an essential off-season economic activity. \$24 033 — 18 months.

89-1006 Dobby exploitation strategy (Global-Canada)
To enable James F. Hickling Management Consultants Ltd, Ontario, to select two or three countries that offer the best prospect for equipment sales in the immediate future from the 10 already identified as potential markets for the Dobby technology; and to develop detailed marketing strategies for each, including the methods to be used and the terms and conditions of the arrangements. \$176 550 — 8 months.

89-1009 Rif slope (Morocco-Canada)
For the Centre national d'études routière, Rabat, and Laval University, Quebec, to permit the École Hassania des travaux public and the Department of Civil Engineering to make a comprehensive study of the instability phenomenon in general, and of land slides in particular in the Rif area. \$356 853 — 42 months.

89-1011 Cyclone-resistant housing (Caribbean-Canada)*
For the University of the West Indies, Trinidad, and the University of Waterloo, Ontario, to improve cyclone resistance in lower-income housing built with community participation. \$392 370 — 30 months.

89-1017 Quaternary hydrogeology (Bénin-Canada) — Phase II*
For the Université nationale du Bénin, Cotonou; the Université de Dakar, Senegal; and Laval University, Quebec, to gain a better knowledge of the hydrodynamic and hydrochemical conditions of aquifer systems in the coastal sedimentary basin of South Bénin for their optimal development. \$375 105 — 36 months.

89-1019 Improved processing techniques for low-grade jute and cuttings (Bangladesh-Canada)
To enable the International Jute

Organization, Dhaka, and Laval University, Quebec, to develop improved processing techniques to upgrade the fibres of low-grade jute and cuttings to maximize their commercial use. \$232 367 — 30 months.

89-1022 Industrial interface-research utilization program (Global-Canada)
For the Earth and Engineering Sciences Division, IDRC, Ottawa, to provide practical on-the-job training to research managers from developing countries and industrial research organizations to which the Technology for Local Enterprise Program has an expressed interest. \$199 000 — 18 months.

89-1025 Water-resources management model for Metro Manila (the Philippines-Canada)
To enable the National Hydraulic Research Center, Quezon City, and McGill University, Quebec, to develop a water-resources management model for Metro Manila and its environs that accounts for the conjunctive use of both surface water and groundwater resources. \$227 700 — 36 months.

89-1027 Plant fibre-reinforced roofing tiles (Côte d'Ivoire-Canada)*
For the École nationale supérieure des travaux publics, Yamoussoukro, and the National Research Council, Ontario, to enable the production of low-cost plant fibre tiles so that the country can reduce its imports of roofing components to be used in building houses. \$245 400 — 36 months.

89-1028 Coal workings (India-Canada)*
For the Mining, Geological and Metallurgical Institute of India, Calcutta, and Laval University, Quebec, to establish a geophysical procedure for delineating uncharted abandoned collieries. \$325 500 — 36 months.

89-1029 Aquifer development (Mexico-Canada) — Phase II
For the Universidad Nacional Autónoma de México (UNAM), Mexico City, and the University of Waterloo, Ontario, to forecast the response of the aquifer system in the Valley of Mexico to the stress of continued groundwater extraction, with special emphasis on evaluating the risk of aquifer contamination, and to strengthen the research group at the Institute for Geophysics at UNAM. \$261 000 — 36 months.

89-1032 Underground mine support (Zimbabwe-Canada)*
To enable the University of Zimbabwe, Harare, and the University of Toronto, Ontario, to improve miners' working conditions by reducing the safety hazard due to collapsing ground in small mines. \$239 400 — 36 months.

89-1035 Electroplating effluents (the Philippines-Canada)*
To enable the Industrial Technology Development Institute, Manila, and the Saskatchewan Research Council, Saskatoon, to develop technology to solve the problem of chromium contamination from the electroplating industry. \$237 000 — 24 months.

89-1039 Processing cashew-nut shell oil (Mozambique-Canada)*
For the Universidade Eduardo Mondlane, Maputo, and the University of Western Ontario, London, to develop a process to transform the raw cashew-nut shell liquid obtained from cashew treatment plants into chemical products useful for the Mozambican market. \$240 600 — 30 months.

89-1043 Foundry sand (Latin America-Canada)*
To enable the Universidad Mayor de San Andrés, Bolivia; the Universidad Nacional de Colombia; the Escuela Superior Politécnica de Litoral, Ecuador; and the Collège d'enseignement général et professionnel de Trois-Rivières, Quebec, to develop molding-sand technology for small- to medium-scale foundries to improve productivity and casting quality. \$239 000 — 36 months.

Fellowships and Awards⁵

89-0001 The Hague Academy of International Law scholarships (Global)
For the Hague Academy of International Law, the Netherlands, to train young legal scholars from developing countries in several aspects of international law; and to offer Canadian support for the Academy's training programs for Third World legal practitioners and researchers. \$30 000 — 12 months.

89-0009 Women's studies training (Thailand)
For Chiang Mai University to enable

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the Faculty of Social Sciences to help a cross-section of people involved in development and research on programs and policy on women's issues in various governmental and nongovernmental institutions throughout Thailand to strengthen their ability to prepare, analyze, and present research information in a conceptually and methodologically accurate way. \$20 038 — 12 months.

89-0010 University training and use of research by local governments (Colombia)
For the Pontificia Universidad Javeriana, Bogotá, to enable the Facultad de Estudios Interdisciplinarios to train a group of local government officials in research utilization through analysis of problems faced in their special area of work. \$48 600 — 24 months.

89-0046 Research management training (Southeast Asia)
For the Southeast Asian Regional Center for Graduate Study and Research in Agriculture, the Philippines, to enable the Research Management Center, in collaboration with the University of the Philippines at Los Baños, to help develop a cadre of research managers proficient not only in the techniques of good research but also in managing a research institution. \$157 555 — 30 months.

89-0072 Training seminar: education, employment, and work (Africa)
To enable the International Institute for Educational Planning, France, to enable 13 key researchers and policy advisors to participate in an intensive course on the linkages between education, work, and productivity in eastern and southern Africa. \$25 000 — 5 months.

89-0083 Library automation (Zimbabwe)
To enable the University of Zimbabwe, Harare, to facilitate resource sharing in the region by providing a series of courses to be developed in the field of information sciences, starting with computerization of library services. \$69 000 — 6 months.

89-0085 Models for native education in Latin America — Phase II
To enable the Saskatchewan Indian Federated College, Canada, to provide indigenous communities with training in research management and administration to enhance the formal knowledge-base relevant to the

development and goals of these distinct societies. \$98 780 — 10 months.

89-0143 Human resources development in Latin America
To enable the Facultad Latinoamericana de Ciencias Sociales, Chile, to study current research-training programs in Brazil, Chile, Colombia, and Mexico that are aimed at strengthening indigenous institutional training capacity and to foster local efforts to establish a regional exchange of researchers. \$61 995 — 15 months.

89-0144 Design of a national policy for doctoral programs (Colombia)
To enable the Universidad Nacional de Colombia, Bogotá, to prepare the necessary elements to formulate a national policy for establishing and evaluating doctoral programs in higher-education institutions. \$50 000 — 6 months.

89-0145 Research methods course for on-farm animal-feed resources (eastern and southern Africa) — Phase III
To enable the International Livestock Centre for Africa, Ethiopia, to complement and strengthen the research and network activities of the Pasture Network for Eastern and Southern Africa by training 20 senior biological scientists in on-farm experimental-research design. \$50 700 — 6 months.

89-0203 Credit institutions for scientific training in Latin America
To enable the Asociación Panamericana de Instituciones de Crédito Educativo, Colombia, to identify the types of loans granted for postgraduate study in selected Latin American countries, to analyze them in relation to their efficiency and results, and to compare the various models encountered. \$59 520 — 12 months.

89-0207 Training of university senior administrators in Central America and the Spanish-speaking Caribbean
To enable the Fundación Interamericana de Costa Rica, San José, to help policymakers and administrators in higher education (vice-presidents, deans, and department heads, for example) to establish a continuous process of critical analysis and reflection on the direction of higher education in their countries. \$53 050 — 12 months.

89-0255 Documentary information retrieval — MINISIS (Cameroon)
To enable the National Assembly of Cameroon, Yaoundé, to acquire a good knowledge of the MINISIS program, to manage its documentary system efficiently, and to serve as a training place for professionals in need of such services. \$35 550 — 12 months.

89-0256 Use of microcomputers in education research (Kenya)
To enable Egerton University, Njoro, to train senior researchers in education in the use of microcomputers in education research, data analysis, and management. \$56 250 — 6 months.

89-0257 Agroforestry experimental-data handling and management: training course (Central, eastern, and southern Africa)*
To enable the International Council for Research in Agroforestry (ICRAF), Kenya, to train up to 15 field technicians involved in ICRAF- and IDRC-supported agroforestry projects in handling and management of experimental data. \$53 000 — 6 months.

89-0258 Marketing information and documentation sciences (West and Central Africa and the Maghreb)*
To enable the Centre national de documentation, Morocco, to train 15 French-speaking instructors in the techniques of marketing and promoting documentation and information services with a view to increasing the use of documentary products in these regions. \$51 090 — 24 months.

89-0263 Project development and management in the social sciences (West and Central Africa)*
For the Université Marien Ngouabi, Congo, and the Université d'Abidjan, Côte d'Ivoire, to enable the Institut supérieur de gestion and the Institut de géographie tropicale to carry out a training program on the development, analysis, and management of research and development projects in social sciences. \$33 542 — 6 months.

89-0286 Identification of research priorities and development of research proposals (Middle East)*
For Suez Canal University, Egypt, to enable the Faculty of Medicine to help participants acquire the skills needed to develop methodologically sound plans for studying priority

questions on health research.
\$73 000 — 6 months.

89-0300 Workshop on the use of SPSS software package (West and Central Africa)*

To enable the Regional Institute for Population Studies, Ghana, in collaboration with the Ghana Institute for Management and Public Administration to enhance the skills of demographers, sociologists, and statisticians from English-speaking countries by training 16 of them in the use of the Statistical Package for the Social Sciences (SPSS).
\$42 015 — 6 months.

89-0307 Internship program (Global) — Phase III

To enable the Fellowships and Awards Division, IDRC, to provide training opportunities to candidates from institutions or projects in which IDRC has an expressed commitment.
\$150 000 — 24 months.

89-1003 Research management workshop (Global-Canada) — Phase II

For the University of Manitoba, Winnipeg, to enable the Department of Agricultural Economics and Farm Management to provide an overview of the knowledge and skills required for assuming research-management roles to a group of developing-country students who are completing their education in Canada (primarily master's and doctoral degrees) in agriculture and related resource sectors.
\$80 270 — 6 months.

89-1046 Research management workshop (Global-Canada) — Phase III

For the University of Manitoba, Winnipeg, to enable the Department of Agricultural Economics and Farm Management to provide an 18-day training course in the application of management principles to agricultural research for trainees supported by the Fellowships and Awards and Agriculture, Food and Nutrition Sciences divisions from developing countries who are completing master's and doctoral degrees in Canada.
\$113 276 — 6 months.

Health Sciences⁶

89-0022 Sexually transmitted diseases (Senegal)

For the Université Cheikh Anta Diop, Dakar, to enable the Institut des sciences et de l'environnement to

study the prevalence of sexually transmitted diseases in their social, cultural, and behavioural context.
\$114 960 — 18 months.

89-0029 Opisthorchiasis (Thailand)

For the Southeast Asian Ministers of Education Organization's Tropical Medicine and Public Health Project, Bangkok, to enable the Department of Clinical Tropical Medicine of Mahidol University to determine the importance of opisthorchiasis as a public-health problem and the effect of treatment on morbidity to assist decision-making regarding opisthorchiasis control.
\$218 260 — 30 months.

89-0041 Anticonceptive technology (India) — Phase V*

For the National Institute of Immunology, New Delhi, to develop an anticonceptive vaccine that would evoke sufficient antibody levels against human chorionic gonadotropin hormone in females to prevent pregnancy and that would be reversible and free of side effects.
\$698 150 — 36 months.

89-0081 Community control of malaria (Thailand)

For Mahidol University, Bangkok, to enable the Faculty of Tropical Medicine to assess the Village Malaria Collaborator program in all five malarial regions in the country.
\$90 180 — 24 months.

89-0084 Revision and testing of material for the health systems research workshop (Global)

To enable the Universidad de San Carlos de Guatemala; the University of Freetown, Sierra Leone; and Makerere University, Uganda, to encourage, facilitate, and coordinate the processes that will speed implementation of health systems research in developing countries.
\$231 860 — 18 months.

89-0088 Analysis of health and nutrition problems (Senegal)

To enable the Centre d'enseignement supérieur en soins infirmiers, Dakar, to explore the factors influencing the health and nutrition status of preschool children to formulate recommendations to improve child health in the rural areas.
\$14 150 — 12 months.

89-0089 Measles immunization (Sudan)

For the University of Khartoum to enable the Department of Pediatrics to compare antibody response, protective efficacy, and cost-benefit

of alternative measles vaccines (high dose Edmonston-Zagreb or high dose Connaught) administered to infants at 5 months of age with that of the conventional measles vaccine and schedule (standard dose Schwarz administered at 9 months of age) in the Sudan.
\$224 870 — 24 months.

89-0090 Leishmaniasis (Mexico) — Phase II

For the Universidad Autónoma de Yucatan, Mérida, to enable the Centro de Investigaciones Regionales to identify risk factors associated with the acquisition of cutaneous leishmaniasis infection or disease in the state of Campeche so as to develop preventive and control measures.
\$110 750 — 30 months.

89-0100 Hepatitis B immunization strategy (Korea-Malaysia-the Philippines)

For the Universiti Sains Malaysia, Minden, in collaboration with the Philippines General Hospital, Manila, and the Kyungpook National University, Taegu, to determine the protective efficacy of hepatitis B virus immunization when integrated into the differing regimes of national Expanded Programs on Immunization to evolve a simplified vaccine-delivery system suited to the individual countries.
\$452 630 — 36 months.

89-0118 Pediatric AIDS (Uganda) — Phase II

For Makerere University, Kampala, to enable the Department of Paediatrics and Child Health to examine the epidemiology of the perinatal transmission of HIV infection by continuing to follow mother-child pairs through a further 2-year period, thereby producing 4 years of continuous data.
\$105 080 — 24 months.

89-0123 Iodine deficiency disorders (Kenya)*

For the Ministry of Health, Nairobi, to enable the National Council for Control of Iodine Deficiency Disorders to conduct a national survey to determine the severity and extent of iodine-deficiency disorders and the consumption of iodized salt.
\$199 982 — 25 months.

89-0124 Chloroquine-resistant malaria (Guinea)

For the Ministère de la santé et de la population, Conakry, to enable the Service national de contrôle du paludisme of the Service de prévention to study the prevalence of malaria, the distribution of chloroquine- and quinine-resistant

⁶ Projects funded jointly with another division are listed under "Multidivisional."

Plasmodium falciparum in Lower Guinea, and the availability and use of antimalarial drugs by the population. \$107 470 — 24 months.

89-0125 Health sciences education rehabilitation (Uganda)
For Makerere University, Kampala, to rehabilitate the faculties of health sciences through specific long-term institutional support and to focus the educational programs of the Faculty of Medicine upon the health and well-being of rural communities as well as upon the urban poor. \$1 055 500 — 48 months.

89-0136 Botanical molluscicide (Endod) toxicology (Global)
For Carleton University, Canada, to enable the Department of Biology to determine whether the plant molluscicide *Phytolacca dodecandra* (Endod) is ecologically and toxicologically safe for use in and by communities to control aquatic snails, the intermediate hosts of human schistosomiasis. \$126 645 — 12 months.

89-0146 Vector blood meals (Peru)
For the Universidad Peruana Cayetano Heredia, Lima, to enable the Instituto de Medicina Tropical Alexander von Humboldt to determine the source of blood meals and presence of leishmania infection in *Lutzomyia* spp. sandflies found in and around homes in the Huayllacallan Valley. \$53 831 — 18 months.

89-0148 Community ORT program (Nicaragua)*
For the Universidad Nacional Autónoma de Nicaragua, León, to enable the Facultad de Ciencias Médicas to determine the effectiveness of a community-based oral rehydration therapy (ORT) program on mothers' knowledge and attitudes regarding acute diarrheal disease on the increased use of oral rehydration and on the reduction of infant death from diarrhea. \$76 466 — 24 months.

89-0149 Onchocerciasis control (Côte d'Ivoire)
To enable the Institut Pierre Richet, Bouaké, to determine the impact of Ivermectine as a means of onchocerciasis control on the transmission of the disease in a forested area with small rivers. \$145 080 — 24 months.

89-0150 Acute respiratory infections (Nepal)*
For Tribhuvan University, Kathmandu, to enable the Institute of Medicine to reduce morbidity and

mortality from acute respiratory infections in 0- to 5-year-old children by developing of a treatment plan based on identification of the principal causative agents, the sensitivity pattern of these bacteria to antimicrobials, and child risk factors. \$103 630 — 24 months.

89-0156 Insecticide resistance detection (Cuba)
To enable the Instituto de Medicina Tropical "Pedro Kouri," Habana, to field test a simple, rapid filter-paper test to detect organophosphate resistance in mosquitos and to determine whether it is as effective as the standard World Health Organization bioassay test. \$25 500 — 18 months.

89-0159 Determinants of contraceptive use and effectiveness (China)
To enable the Nanjing College for Family Planning Administrators to determine the level and identify the determinants of contraceptive use and effectiveness, with particular focus on the failure rate in Yangzhou City, as a basis for formulating an effective intervention design to reduce contraceptive failure and the need for abortion. \$77 190 — 12 months.

89-0161 Household water disinfection (Thailand)
To enable King Mongkut's Institute of Technology, Bangkok, to develop a low-cost and affordable device for disinfecting shallow wells in rural villages. \$46 820 — 24 months.

89-0169 Slow sand filtration (Egypt)
For El-Mansoura University to enable the Civil Engineering Department to develop a simple, cost-effective, easy to operate, and easy to maintain technology for water treatment in rural areas. \$112 920 — 30 months.

89-0170 Breastfeeding practices and working mothers (Indonesia)*
For the Universitas Indonesia, Jakarta, to enable the Faculty of Medicine to examine the problems associated with breastfeeding among working mothers with the aim of formulating solutions for its promotion. \$58 354 — 21 months.

89-0171 Periurban sanitation (Lesotho)
For the Ministry of Interior, Maseru, to enable the Urban Sanitation Improvement Team to field test the "minitanker" equipment for emptying pit latrines to examine the specifications required for the

practical operation and maintenance of an affordable service for emptying pit latrines, and to disseminate the findings to other departments and organizations working to promote nonwaterborne sanitation. \$9 820 — 12 months.

89-0173 Educational strategy to reduce contraceptive failure in urban China
For the Lu Wan District Maternity and Child Health Hospital, Shanghai, to enable the Department of Obstetrics and Gynecology to improve the choice and use of contraception by means of a focused health-education program at study sites, so as to reduce the incidence of unwanted pregnancy after the first child and the need for induced abortion. \$224 990 — 36 months.

89-0180 Roughing filters (Colombia)
To enable the Universidad del Valle, Cali, to optimize the hydraulic cleaning of roughing filters and develop guidelines for their operation and maintenance as pretreatment units in rural and periurban systems supplying surface water. \$67 580 — 24 months.

89-0182 Household health-care use and expenditure in rural Kenya
For the African Medical and Research Foundation, Nairobi, to examine the pattern and cost of health-service use at the household level and to determine what effect introducing user fees might have on access to modern health-care services by, especially, women and children. \$60 900 — 24 months.

89-0184 University partnership in essential health research (Global)
For McMaster University, Canada, to improve the relevance of health professionals' education by enhancing the ability of graduates to identify and solve the problems of communities in which they serve. \$125 000 — 18 months.

89-0195 Sociocultural factors influencing contraceptive behaviour (Indonesia)
For the Yayasan Pelayanan Dan Pengembangan Masyarakat Desa, Malang, to examine the dynamics of decision-making concerning contraceptive use, and how certain factors influence the adoption and continuation of contraceptive use in eight villages of East Java. \$50 040 — 12 months.

89-0205 Health-system research in Thatta district (Pakistan) — Phase II*

For the Aga Khan University, Karachi, to enable the Department of Community Health Sciences in the Faculty of Health Sciences to strengthen the health services in Sindh Province by developing and testing innovative health-services planning, management, and delivery processes, with an emphasis on maternal and child health services. \$436 950 — 36 months.

89-0209 Rainwater catchment (Bangladesh)*

To enable the Bangladesh Agricultural University, Mymensingh, to develop and demonstrate an appropriate rainwater-catchment system for rural areas where tubewells cannot readily be used because of the cost of construction and the quality of the water (salinity or iron content). \$136 510 — 24 months.

89-0211 Gravel water-filtration systems (Jordan)

To enable the Royal Scientific Society, Amman, to investigate the feasibility of using rock or gravel filters (an inexpensive process) in upgrading the quality of effluent from waste-stabilization ponds to reduce fecal coliform and algal concentrations to allowable levels for use in drip irrigation by low-income rural communities. \$102 000 — 30 months.

89-0216 Community prevention of malaria (Tanzania)*

For the National Institute for Medical Research, Muheza, to enable the Amani Medical Research Centre to determine and compare, in community trials, the performance of permethrin-impregnated bed nets versus bed curtains on the reduction of clinical, parasitological, and entomological malarial indices. \$152 960 — 36 months.

89-0226 AIDS counselling and education (Dominican Republic)

To enable the Instituto de Sexualidad Humana, Santo Domingo, to compare the effectiveness of individual versus group therapy, including counselling, emotional support, and education, in modifying high-risk sexual behaviour in seropositive individuals. \$114 556 — 24 months.

89-0227 Iodine deficiency control (India)*

For Shreemati Nathibai Damodar Thackersey Women's University, Bombay, to enable the Home Science

College to provide baseline data about the iodine status of an "at risk" population in areas not documented as endemic goitre areas, for use by the Department of Public Health of the Government of Maharashtra. \$37 683 — 24 months.

89-0233 Infant feeding and diarrheal disease (Kenya)*

For the Kenya Medical Research Institute, Nairobi, to enable the Unit of Applied Human Nutrition in the Department of Food Technology and Nutrition at the University of Nairobi to find means of preventing growth faltering caused by nutrient loss and increased catabolism due to diarrhea. \$40 156 — 27 months.

89-0235 Tropical knapsack sprayer (Malaysia)*

To enable the Malaysian Agricultural Research and Development Institute, Kuala Lumpur, to develop a hand-operated knapsack pesticide sprayer suitable for local manufacture that would be safer, more efficient, and more affordable than the model currently in use in developing countries. \$94 700 — 24 months.

89-0242 Women's status and fertility in the Gusii community (Kenya)

For the University of Nairobi to enable the Institute of African Studies to investigate cultural and social issues related to women's status and the adoption of fertility regulation. \$2 904 — 8 months.

89-0243 Food security and nutritional status of households (Congo)*

To enable the Organisation de recherche scientifique et technique d'outre-mer, Brazzaville, to identify nutritionally vulnerable groups and determine mechanisms to ensure the food security of these and other groups. \$104 000 — 24 months.

89-0244 Occupational health and safety in the cotton industry (Uganda)*

For the Ministry of Labour, Kampala, to enable the Factories Inspectorate to identify and evaluate hazards to the safety and health of workers in the cotton industry and to develop measures for reducing them. \$195 700 — 24 months.

89-0246 Paradigm of family medicine in less-industrialized countries (Global)

For the College of Family Physicians of Canada, Ontario, to enable World Organization of National Colleges and Associations of Family Medicine

to explore the applicability of the family-medicine paradigm in the developing world and to identify similarities and differences in needs and resources in family medicine around the world. \$74 500 — 30 months.

89-0247 High altitude and mining (Peru)

To enable the Universidad Peruana Cayetano Heredia, Lima, to assess the health status of the Andean population, with particular interest in Andean miners, and with emphasis on diseases that are or may be related to physiological disturbances associated with high altitudes. \$146 445 — 18 months.

89-0251 Biomedical and sociocultural dimensions of sickle-cell anemia (Nigeria)*

For Obafemi Awolowo University Teaching Hospital, Ile Ife, to describe the natural history of sickle-cell anemia (SCA) and its genetic trait in a selected area of Nigeria, to collect information on the cognitive dimensions and cultural practices of parents of children with SCA, and to develop a health-education package and health-care guidelines for patients and families afflicted by SCA. \$122 920 — 60 months.

89-0270 Ecological, social, and health assessment (Mexico)*

For the Universidad Autónoma de Yucatán, Mérida, to enable the Centro de Investigaciones Regionales "Hideyo Noguchi," in collaboration with the Centro de Investigaciones y de Estudios Avanzados del Instituto Politécnico Nacional, to improve the well-being of a Mayan community through information generated with the active involvement of the people themselves. \$50 000 — 8 months.

89-0290 Ecology of leishmaniasis infection (Jordan)*

For the University of Jordan, Amman, to study the prevalence and community risk factors (ecology) of cutaneous leishmaniasis so that appropriate preventive and control measures can be proposed. \$146 600 — 36 months.

89-0296 Proposed Canadian university consortium for health in development (Global)

To enable McMaster University, Canada, to facilitate the actual formation and incorporation of the proposed Canadian university consortium for health in development and to provide partial support for its activities over the next 2 years. \$156 900 — 24 months.

89-0319 Evaluation and planning centre (South Africa)*

For the University of Natal, Durban, to enable the Department of Pediatrics to develop a capacity for researching, managing, and planning health and development programs in a nonracial, democratic, and equitable postapartheid society. \$108 359 — 12 months.

89-0324 Social analysis of AIDS (Uganda)*

For Makerere University, Kampala, to enable its Faculty of Social Sciences to provide descriptive baseline data on AIDS for policy and programmatic intervention. \$61 250 — 12 months.

89-0326 Evaluation of occupational health-service systems (Republic of Korea)

For the Catholic Industrial Medical Center, Seoul, to enable the Department of Preventive Medicine of the Catholic University Medical College to establish a methodology for evaluating the performance of two different modes of occupational health-care delivery. Both preventive and curative services will be included in the study. \$135 920 — 24 months.

89-0330 Rainwater catchment (Tanzania)*

For the Centre for Housing Studies, Dar es Salaam, to enable the Water Research Division of the Ministry of Water to review the current knowledge, practices, and attitudes with regard to rainwater-harvesting techniques and systems with the aim of improving and popularizing such methods. \$45 450 — 18 months.

89-0334 Hierarchy of risk factors in childhood pneumonia (Brazil)*

To enable the Universidade Federal de Pelotas to investigate the relative importance of various environmental, socioeconomic, and behavioral variables hypothesized to be associated with increased risk of contracting pneumonia in young children living in the urban slums of Fortaleza in northern Brazil. \$120 000 — 24 months.

89-0335 Field trial of a noninvasive test for anemia (Nigeria)*

For the University of Lagos, Nigeria, to enable the Institute of Child Health and Primary Care to evaluate the sensitivity and accuracy of a method of screening for anemia that involves colour-matching an individual's tongue with a hemoglobin scale developed by the researcher for

eventual use as an alternative to blood testing. \$12 716 — 9 months.

89-0336 Evaluation of the height-weight gain of children from 0 to 5 years (Bénin)*

For the Université nationale du Bénin, Cotonou, to enable its department of pediatrics and genetics to establish standards for height-weight gain and brachial perimeter increase in children from birth to 5 years of age and to determine the incidence and prevalence of malnutrition among the various age groups of the cohort. \$39 280 — 60 months.

89-0337 Study of the sociocultural aspects of epilepsy (Senegal)*

For Environnement et Développement du Tiers-Monde, Dakar, to understand the sociocultural interpretation of epilepsy as manifested in the attitude of the epileptic, the family, the community, and the traditional health practitioner. \$40 440 — 12 months.

89-0339 Study of HIV infection risks (Bénin)*

For Laval University, Canada, to allow its Département de médecine sociale et préventive to help prevent AIDS in the Republic of Bénin by contributing to a better understanding of the risk factors and cofactors. \$9 675 — 3 months.

89-0340 Measuring child development in Yorubaland (Nigeria)*

For Lagos University Teaching Hospital to enable the Institute of Child Health and Primary Care to administer the Denver Developmental Screening Test to a sample of children to see how it can be validated or adapted for use under Nigeria's environmental and cultural conditions. \$6 163 — 9 months.

89-0346 Rural sanitation (South Africa)*

For the Consultancy for Alternative Education, Canada, to enable the Wilgespruit Fellowship Centre, Roodepoort, to develop further and refine a manual on rural sanitation, aimed at the community fieldworkers and health workers in South Africa and in other Third World countries. \$55 675 — 12 months.

89-1014 Community health research (Ethiopia-Canada) — Phase II

For McGill University, Montreal, to enable the Ministry of Health, Addis Ababa, to create health research and analytic capacities at the district and community levels; to provide

community-based health information and analyses to the Ministry for decision-making; and to establish a continuing dialogue regarding health and health services among district health services, the University's health faculties, and the Ministry. \$850 000 — 36 months.

89-1030 Seminar on applied research in health (Bénin-Canada)*

To enable the Université nationale du Bénin, Cotonou, and Laval University, Quebec, to help the researchers teaching at the Faculty of Health Sciences to design, describe, and carry out the various steps in an operational research project in applied medicine. \$51 460 — 12 months.

89-1037 Community participation in PHC (Botswana-Canada)

To enable the University of Botswana, Gaborone, and the University of Toronto, Ontario, to gather in-depth information on primary health care (PHC) and the role of the nurse in community participation. \$108 560 — 12 months.

89-1038 Health and nutrition impact on plantation workers' families (Dominican Republic-Canada)

To enable the Centro de Promoción Integral y Salud Educacional, Santo Domingo, and Laval University, Quebec, to determine the sociosanitary situation in the *bateys* of the Dominican Republic, using maternal and child indicators, with respect to the interventions of the project Bon Samariten to make recommendations to increase the efficiency of these interventions. \$220 820 — 36 months.

Information Sciences⁷

89-0002 Refugee information (Sudan)

To enable the Office of the Commissioner for Refugees, Khartoum, to take the first steps toward improving the handling and disseminating of information concerning refugees in the country. \$120 000 — 24 months.

89-0011 SITIA: Telematics and Informatics Information System for Africa (West and Central Africa)

To enable the Institut africain d'informatique, Gabon, to

⁷ Projects funded jointly with another division are listed under "Multidivisional."

disseminate, within a network formed of country members of the Institute, information on informatics and telematics technologies accounting for the needs of the different categories of users and their means of access. \$224 600 — 30 months.

89-0023 Debt recording and management system (Thailand)

For the Ministry of Finance, Bangkok, to support the application of the Commonwealth Secretariat's computer-based debt recording and management system and to provide appropriate training in its use. \$118 300 — 24 months.

89-0024 Business and economics libraries network: pilot project (Pakistan)

For Lahore University of Management Science to enable the Graduate School of Business Administration to establish in the Lahore area a network of libraries and bibliographic data bases specializing in public and business administration, management, and economics to serve as a model information-sharing network for other libraries and information centres in the country. \$75 700 — 24 months.

89-0025 African Standards Documentation Network — Phase II

To enable the African Regional Organization for Standardization, Kenya, to make its documentation and information systems fully operational by developing the participating national centres of the network and strengthening the exchange of information among them. \$244 685 — 24 months.

89-0033 National health documentation and information network (Zimbabwe)

For the University of Zimbabwe, Harare, to enable the Medical Library to improve access to information emanating from or relating to the country's health services by establishing a national health documentation and information network. \$141 115 — 24 months.

89-0035 Master's degree in library studies (Caribbean)

For the University of the West Indies, Jamaica, to help the Department of Library Studies establish a 15-month master's degree program in library studies. \$125 500 — 24 months.

89-0044 Provincial Management Information System (PMIS) (Thailand)

For the National Economic and

Social Development Board, Bangkok, to improve the PMIS so that provincial officers at all levels will have a long-range planning, monitoring, and evaluating tool to link provincial production, employment development, and marketing. \$265 800 — 24 months.

89-0045 Community network of business information and documentation (West Africa)

For the West African Economic Community, Burkina Faso, to establish a cooperative relationship between the main and decentralized focal points for collecting, processing, and disseminating commercial information and to allow the Centre régional d'information commerciale to access existing information systems outside of the subregion. \$309 000 — 24 months.

89-0069 HELLIS: Health Literature, Library, and Information Service (Sri Lanka)

For the University of Colombo to enable the Faculty of Medicine to achieve "Health for all by the year 2000" by providing timely health and biomedical information to health-care professionals to assist them in their decision-making. \$77 870 — 36 months.

89-0070 Geographic information system for small municipalities (Costa Rica)

For the Universidad Nacional, Heredia, to enable the Escuela de Ciencias Geográficas to develop a microcomputer-based prototype tool for constructing, updating, and maintaining master plans in small municipalities and to test it in two representative municipalities. \$91 040 — 24 months.

89-0078 Information service on innovation (Uruguay)

To enable the Centro de Innovación y Desarrollo, Montevideo, to support and stimulate the agents of innovation, especially the small- and medium-sized entrepreneurs, by establishing an information service on innovation that will seek to facilitate cooperation with technical, commercial, and financial information networks and development agencies. \$243 630 — 36 months.

89-0080 Water and sanitation information network (Tanzania)

For the Ministry of Water, Dar es Salaam, to enable the Rwegaralila Water Resources Institute to establish a national water and sanitation information network by strengthening the documentation centre at the

Institute in collaboration with the Water Master Plan Coordination Unit Documentation Centre and the Ministry Headquarters library. \$129 480 — 27 months.

89-0086 Occupational health and safety information and documentation centre (Malawi)

For the Ministry of Labour Headquarters, Lilongwe, to enable the Factories Inspectorate to collect, organize, and disseminate information related to occupational health and safety by establishing an information and documentation centre. \$148 370 — 24 months.

89-0097 Information service for industry (Colombia)

To enable the Asociación Colombiana Popular de Industriales, Bogotá, to reinforce its technological information service for industry and to decentralize its services to three regions of the country. \$156 680 — 24 months.

89-0098 Village information centres (India)*

To enable the Manipal Industrial Trust, Karnataka, to establish 50 village information centres divided equally between Udupi and Thirthalli taluks, Karnataka State, and by testing and refining methodologies for delivering information to rural communities, to create a model for replication elsewhere in India. \$127 240 — 36 months.

89-0105 Regional information network on bananas and plantains in Latin America and the Caribbean

To enable the Unión de Países Exportadores de Banano, Panama, to create and organize an information network on bananas and plantains by establishing national units to collect and disseminate information on a regular and continuous basis and to link the regional activities with those of the global coordinating centre at Montpellier, France. \$218 000 — 24 months.

89-0112 Information service for small-scale industries (Indonesia)

To enable the Perkumpulan Untuk Peningkatan Usaha Kecil, Bandung, to provide information services for the benefit of small-scale industries in rural areas of West Java. \$98 730 — 36 months.

89-0155 Documentation and information centre for small- and medium-sized industries (Ecuador)

To enable the Instituto de Investigaciones Socioeconómicas y

Tecnológicas, Quito, to reinforce its documentation and information centre and to initiate the decentralization of its information services through the creation of two provincial industrial information offices for small- to medium-sized industries. \$219 600 — 36 months.

89-0163 National health-information network (Colombia) — Phase II

To enable the Federación Panamericana de Asociaciones de Facultades de Medicina (FEPAFEM), Bogotá, to develop and consolidate a national health-information network of independent units interacting to achieve rational and efficient use of health and biomedical information and to pave the way for the transfer of network operations from FEPAFEM to a national institution. \$153 580 — 24 months.

89-0174 Agricultural research management information system (the Philippines)

For the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development, Los Baños, to accelerate technology generation and use for rural development by strengthening agricultural research and development management at both national and regional levels. \$430 700 — 48 months.

89-0193 Computer-based networking in Africa: PADIS

For the United Nations Economic Commission for Africa, Ethiopia, to enable the Pan African Development Information System (PADIS) to improve the flow of information for socioeconomic development, to improve the timely use of existing information systems and networks through the development of on-line linkages among them, to contribute to the appropriate use of data communications information technologies, and to improve linkages between researchers in Africa and elsewhere working on development issues. \$217 825 — 24 months.

89-0196 RELIS: Latin American labour information network — labour inspection module*

For the Centro Interamericano de Administración del Trabajo, Peru, to develop the Labour Inspection Module of RELIS as an information service to labour administrators with a view to facilitating labour administration and the enforcement of labour legislation. \$264 545 — 24 months.

89-0213 Rural audio library (Mali)

For the Ministère des sports, des arts et de la culture, Bamako, to enable the Direction nationale des arts et de la culture to help rural populations participate in their own economic and social development by promoting the dissemination of modern and traditional knowledge through rural audio libraries. The existing national network will be consolidated and extended by creating 50 new audio libraries in different geographic, linguistic, and cultural areas. \$99 305 — 24 months.

89-0217 DRMS: Debt Recording and Management System (Sri Lanka) — Phase II

For the Commonwealth Fund for Technical Cooperation, UK, to help the External Debt Management Unit of the Ministry of Finance and Planning, Colombo, to monitor and manage external debt in the context of an overall macroeconomic framework by reinforcing the skills and upgrading the capability of staff to use Commonwealth Secretariat's DRMS version 5. \$52 050 — 6 months.

89-0225 DEVINSA — Development Information Network for South Asia — Phase II

To enable the Marga Institute, Sri Lanka, to strengthen the Committee for Studies in Cooperation for Development in South Asia's information base in support of its research programs, thereby enabling each lead institution to input information into the system relating to its own interests and to retrieve from it the data required for its research studies. \$245 040 — 36 months.

89-0230 DRMS: Grant and debt recording and management system (Mozambique)*

For the Commonwealth Fund for Technical Cooperation, UK, to enable the Public Debt Department of the Ministry of Finance, Maputo, to support the application of the Commonwealth Secretariat's DRMS and provide appropriate training in its use so that the Ministry of Finance and the Bank of Mozambique will be able to use it for contracting and servicing external grants and loans and internal lending. \$101 100 — 24 months.

89-0240 CREDESA Information and Documentation Centre (Bénin)*

For the Université nationale du Bénin, Cotonou, to enable the Faculté

des sciences de la santé and the Centre régional de développement et santé (CREDESA), Pahou, to set up within the Pahou health development project a specialized information and documentation centre in primary health care. \$140 452 — 36 months.

89-0262 SEAWIC: Southeast Asian Weed Information Center — Phase II*

For the Regional Center for Tropical Biology, Indonesia, to modify its information program to meet the needs of extension workers, field workers, and farmers, while launching new services; to continue to provide information services to weed scientists; and to market the SEAWIC team's expertise, products, and services. \$315 652 — 36 months.

89-0272 Information activities on post-dam development (Mali-Mauritania-Senegal)*

For the Organisation pour la mise en valeur du fleuve Sénégal, Dakar, to allow the Centre régional de documentation to consolidate its existing documentation system and to make it available to the various community groups with an interest in the phase of development following the completion of two dams on the Senegal River. \$111 555 — 24 months.

89-0277 MINISIS Resource Centre (China) — Phase II*

For the Scien-Tech Information Centre (STIC), Beijing, to provide direct services to the Chinese users of MINISIS, to promote the application of MINISIS as a software tool in information-processing applications, to assist in the on-going development of a Chinese version of MINISIS, and to develop further applications using MINISIS within STIC. \$93 790 — 24 months.

89-0309 Agricultural information (Senegal) — Phase III*

For the Ministère du développement rural, Dakar, to enable the Documentation Centre to set up a decentralized information-access system in nine areas of the interior of the country by creating regional documentation cells and diversifying information products. \$225 841 — 36 months.

89-0317 National information system for science and technology (Tanzania)*

To enable the Tanzania Commission for Science and Technology, Dar es Salaam, to improve its ability to advise on the implementation and planning of the national policy for

science and technology. \$115 950 — 24 months.

89-1018 Local-level mapping (Nigeria—Canada) — Phase II
To enable the University of Lagos and the University of Waterloo, Ontario, to develop a methodology based on the integration of remote sensing techniques and local knowledge systems using a "geographic information system" approach and to let national, state, and local planning authorities know about the powerful potential of these technologies to harness people's creativity. \$246 695 — 36 months.

Multidivisional⁸

89-0031 Integrated health intervention for childhood diarrhea (Thailand)
To enable Khon Kaen University, Thailand, to develop and test a community-based integrated health intervention program to reduce the incidence of childhood diarrhea in northeastern Thailand. \$189 460 — 30 months. HS—SS.

89-0047 Information management training series (Southeast Asia)
For the Universiti Sains Malaysia, Minden; the Southeast Asian Regional Center for Graduate Study and Research in Agriculture, the Philippines; and the Asian Institute of Technology, Thailand, to ensure that the participants learn information packaging and consolidation techniques. \$646 650 — 36 months. FAD—IS.

89-0050 National Information Network and System for Jamaica: public education program
To enable the National Council on Libraries, Archives and Documentation Services, Kingston, to launch a sustained public-relations campaign to increase public awareness and use of information and financial support for information .

services. \$110 000 — 24 months. COMM—IS.

89-0057 Rural enterprises (Latin America)
For the Instituto Latinoamericano de Fomento Agroindustrial, Costa Rica, to improve the probability that research results will be applied in rural enterprise development projects in Latin America. \$339 300 — 24 months. AFNS—EES—FAD—HS.

89-0101 Mobilization of private sector resources for promotion of immunization (Indonesia)
To enable Yayasan Kusuma Buana, Jakarta, to demonstrate the feasibility of adapting modern marketing technologies and strategies for immunization information, education, and promotion. \$87 480 — 24 months. COMM—HS.

89-0106 CESODIST: Subregional Centre for Scientific and Technical Documentation and Information (Central Africa)
To enable the Customs and Economic Union of Central Africa, Central African Republic, to strengthen subregional scientific cooperation by setting up an information system coordinated by CESODIST to support research programing and the dissemination of research results. \$184 805 — 36 months. FAD—IS.

89-0111 Nutrition education for young women (India)
To enable the Nutrition Foundation of India, New Delhi, to develop appropriate models for delivering nutrition education and vocational training to adolescent women to improve the quality of life in rural areas. \$243 500 — 24 months. AFNS—COMM—FAD.

89-0147 Graduate education and research and development in African universities
To enable the Association of African Universities, Ghana, to help reactivate and strengthen graduate education and its contribution to research and development, especially in key development fields, by assisting African universities to develop mechanisms for cooperation and the sharing of resources. \$77 760 — 12 months. AFNS—FAD—OPE.

89-0187 Communication strategies for drug-abuse prevention (Peru)
To enable the Centro de Información y Educación para la Prevención del Abuso de Drogas, Lima, to develop and evaluate a training methodology

based on the use of communication media and group discussions by health promoters in activities aimed at preventing drug abuse. \$30 760 — 12 months. COMM—FAD.

89-0190 Seismic hazard (Latin America and the Caribbean)
For the Instituto Panamericano de Geografía y Historia, Mexico, to enable the Centro de Coordinación para la Prevención de Desastres Naturales en América Central, Guatemala; the Universidad Nacional Autónoma de México; the Centro Regional de Sismología para América del Sur, Peru; and the Seismic Research Unit of the University of the West Indies, Trinidad and Tobago, to create formal working relationships among themselves for regional cooperation in activities related to seismic-risk determination and the mitigation of seismic hazard. \$595 500 — 60 months. EES—IS.

89-0206 Farm forestry (China)
For the Chinese Academy of Forestry, Beijing, to maximize the sustainable productive use of scarce land and forest resources for the benefit of producers and consumers, and to strengthen the capacity of the Academy to undertake integrated research of increasing quality, coherence, scope, and impact. \$1 128 670 — 36 months. AFNS—FAD—IS—OT—SS.

89-0210 Integrated community nutrition (Thailand)
For Mahidol University, Bangkok, in collaboration with Khon Kaen University, the Ministry of Agriculture and Cooperatives, and the Ministry of Public Health to formulate and implement appropriate nutritional improvement programs for northeast Thailand employing a multidisciplinary research approach. \$214 400 — 18 months. AFNS—COMM—FAD—HS—SS.

89-0212 APPROTECH-Asia information system on water and sanitation — Phase II
For the Philippine Social Development Center, the Philippines, to strengthen the capabilities of selected national and provincial nongovernmental organizations operating under the APPROTECH-Asia umbrella for handling information activities in support of their community-based water and sanitation programs. \$307 720 — 36 months. FAD—HS—IS.

89-0218 Child nutrition and agriculture (Nigeria)*
To enable Obafemi Awolowo

⁸ Projects listed in this section are jointly funded by several divisions: AFNS = Agriculture, Food and Nutrition Sciences Division; COMM = Communications Division; EES = Earth and Engineering Sciences Division; EO = Executive Office; FAD = Fellowships and Awards Division; HS = Health Sciences Division; IS = Information Sciences Division; OPE = Office of Planning and Evaluation; OT = Office of the Treasurer; SS = Social Sciences Division.

University, Ile Ife, to assess the effect of agricultural modernization on the health and nutrition status of children under 10 years and their mothers in the Oyo North Agricultural Development Project area and to propose appropriate policies for nutritional improvement. \$236 000 — 24 months. AFNS-HS.

89-0221 "The family house": a public health soap opera (Egypt)
To enable the Centre for Development Communications, Giza, to increase awareness within the general public about certain public-health problems and teach appropriate concepts and practices through innovative use of mass-media entertainment. \$117 000 — 30 months. COMM-HS.

89-0222 Working mothers and their children: health risks and needs (Mexico)
For the Population Council, USA, to enable its Regional Office in Mexico City to explore the specific health risks to mothers and infants of certain types and conditions of maternal employment as well as the effect on health of inadequate child-care arrangements. \$242 930 — 30 months. HS-SS.

89-0241 Seasonal hunger and nutrition (Kenya)
For Egerton University, Njoro, to enable the Department of Home Economics to provide detailed knowledge about the nutritional status of agricultural workers who are landless as compared to their counterparts who own small plots in the same area and to determine whether nutritional status is affected by seasonal food shortages. \$56 097 — 18 months. AFNS-HS.

89-0248 Mass media and oral health (Kenya)*
To enable Mazingira Institute, Nairobi, to disseminate the findings of a previous research project that demonstrated that chewsticks were as effective in maintaining good oral hygiene as manufactured toothbrushes used with or without toothpaste. \$45 483 — 12 months. COMM-HS.

89-0252 Models and strategies for small-scale farmers' credit (Colombia)
For the Fundación para la Aplicación y la Enseñanza de las Ciencias, Cali, to identify the most appropriate models and training strategies for extending credit to small-scale farmers, and to systematize that knowledge and its social application

through the publication of a case study. \$100 000 — 36 months. AFNS-SS.

89-0265 Pastoral systems of the Maghreb (Algeria) — Phase II*
For the Ministère de l'enseignement supérieur, Algiers, to sustainably improve the production and standard of living of the small- and medium-scale pastoralists and agropastoralists of the Algerian steppe and to stop the degradation of the steppe by allowing its regeneration. \$249 830 — 36 months. AFNS-SS.

89-0266 Pastoral systems of the Maghreb (Morocco) — Phase II*
For the Institut national agronomique et vétérinaire, Rabat, to develop practical, appropriate ways of managing pastoral resources that would improve the living conditions of the pastoralists while preserving the rangelands. \$248 850 — 36 months. AFNS-SS.

89-0267 Pastoral systems of the Maghreb (Tunisia) — Phase II*
For the Ministère de l'agriculture, Tunis, to enable the Institut des régions arides to develop a better approach to the management of the Tunisian steppe to improve the living and working conditions of the people and reduce the degradation of the environment. \$248 760 — 36 months. AFNS-SS.

89-0268 Small Ruminants Network (Asia)*
For Central Research Institute for Animal Science, Indonesia, to strengthen small-ruminant research and development by establishing effective and practical linkages between the national programs. \$510 660 — 48 months. AFNS-COMM-FAD-SS.

89-0289 Pyrethroid poisoning (China) — Phase II*
For the Institute of Occupational Medicine, Beijing, to confirm and popularize the research results obtained during phase I of the pyrethroid project and to promote the safe use of pyrethroid and other pesticides on a larger scale. \$57 845 — 24 months. COMM-HS.

89-0295 Procurement, operation, maintenance, and repair of scientific equipment (eastern and southern Africa)
To enable the International Foundation for Science, Sweden, to facilitate the formation of a network of senior technicians in the region who will collaborate on issues

pertaining to purchase, repair, and maintenance of scientific research equipment and instruments. \$150 000 — 24 months. AFNS-EES-FAD.

89-0298 Impact of the Kabuhl Project (the Philippines)
To enable the Capiz Research, Extension and Development Consortium, Roxas City, to examine the impact on beneficiaries and their communities of the various community-based (*Kabuhl*) projects designed to provide training for rural, low-income homemakers. \$22 230 — 12 months. FAD-SS.

89-0304 Health communication (Papua New Guinea)
To enable the Enga Provincial Government, Wagbag, to develop and test a set of health education and communication strategies and materials that can be adopted by tribal communities for campaigns to reduce the prevalence of diarrheal disease. \$115 416 — 36 months. COMM-FAD-HS.

89-0312 Northeast Thailand development study
To enable the Green-Esarn Research and Development Institute, Bangkok, to identify and address the principal economic, social, administrative, and political problems of the poorest people in the country's least developed region — the Northeast or Esarn region. \$20 000 — 12 months. EO-SS.

89-0320 Development of microbiological water-quality testing capability (Canada)
To enable the National Water Research Institute, Ontario, and the Cree Nations Split Lake Band, Manitoba, to assess the feasibility of introducing a simple, inexpensive bacteriological water-monitoring system, operated and maintained by the Band Council of the Band of First Nations at Split Lake. \$29 500 — 15 months. HS-OPE.

89-0325 Integrated agricultural development (China)*
To enable the Guizhou Academy of Agricultural Sciences, Guiyang, to improve the production, income, and sustainability of rural villages in Guizhou Province. \$198 050 — 36 months. AFNS-FAD.

89-1001 Young Canadian researchers award program (Global)
For the Communications, Fellowships and Awards, Health Sciences, and Social Sciences

divisions, IDRC, to contribute to the growth of a research capacity in Canada that is responsive to Third World priorities by supporting Canadians at various stages of their academic and professional careers in research or training undertaken in a Third World country. \$625 000 — 12 months. COMM-FAD-HS-SS.

89-1002 Vegetable extracts (Rwanda-Canada)

For the Université nationale du Rwanda, Butare, and the University of Quebec at Chicoutimi to allow researchers and government services to initiate the production of vegetable extracts, and, more generally, to master the conditions for implementing a small-scale industry for developing local raw-vegetable resources. \$308 118 — 24 months. EES-IS.

89-1007 Baked bricks (Rwanda-Canada)

For the Université nationale du Rwanda, Butare, and the University of Sherbrooke, Quebec, to maximize production of traditional burnt-clay bricks with a view to making available low-cost, durable housing. \$266 800 — 48 months. EES-SS.

89-1012 Botanical pesticides (Thailand-Canada)

For Chiang Mai University and the University of Ottawa, Ontario, to develop safe and inexpensive insecticides and antifeedants from plants growing in Thailand, using a multidisciplinary approach. \$419 600 — 24 months. AFNS-HS.

Social Sciences⁹

89-0027 Structural adjustment and technology supply (Nigeria)

To enable the National Centre for Economic Management and Administration, Ibadan, to study the effects of the structural adjustment program on the nature and volume of technology supplied by foreign and domestic sources. \$61 010 — 24 months.

89-0028 Intermediate cities and regional development (Mexico)

For the Universidad Nacional Autónoma de México, Mexico City, to enable the Instituto de Geografía to evaluate government efforts to encourage the growth of intermediate cities. \$102 160 — 24 months.

89-0032 Macroeconomic modeling (Dominican Republic)

To enable the Centro de Investigaciones y Economía Aplicada, Santo Domingo, to build a small- to medium-sized macroeconomic model of the Dominican economy and to analyze the implications of alternative government policies and the impact of external shocks on the domestic economy. \$81 340 — 18 months.

89-0034 Education and work in Uruguay

To enable the Centro de Investigación y Experimentación Pedagógica, Montevideo, to gather basic information about the factors that determine the decisions of individuals from different socioeconomic groups regarding both education and work in the context of the social changes that are taking place in Uruguay. \$39 830 — 18 months.

89-0042 Regional development plan for Xinjiang (China)

To enable the Xinjiang Research Institute of Scientific and Technological Policy, South Urumqi, to provide a comprehensive, up-to-date assessment of Xinjiang's development capabilities as well as strategic planning guidelines. \$130 000 — 24 months.

89-0054 Distance education on research methods (Latin America)

For the Ministerio de Educación Pública, Costa Rica, to enable the Departamento de Investigación Educativa to adapt and apply a model for training government officials in Central America and the Caribbean in social research methods applied to education with a view to bringing the results of education research to bear on policy-planning and decision-making. \$47 100 — 21 months.

89-0055 Economic Research Consortium (Peru)

For the Centro de Investigaciones de la Universidad del Pacífico, the Centro de Estudios y Promoción del Desarrollo, the Grupo de Análisis para el Desarrollo, the Instituto de Estudios Peruanos, and the Pontificia Universidad Católica del Perú, all in Lima, to support a 4-year program of research, publication, and dissemination on key issues of economic policy. \$344 325 — 48 months.

89-0056 Internal trade (China)

For the Shanghai Academy of Social Sciences to enable the Institute of National Economy Research to document the patterns and

mechanisms of internal trade liberalization, project future patterns, anticipate problems, assess benefits, and examine alternative policy and institutional approaches. \$40 700 — 24 months.

89-0059 The housing problem and community participation (Costa Rica)

To enable the Centro de Estudios para la Acción Social, San José, to produce a comparative analysis of the present and potential role of community organizations in the process of formulating and implementing public-housing policy. \$28 068 — 24 months.

89-0060 Alternative education for high-school graduates (Dominican Republic) — Phase II

To enable the Colegio Dominicano de Estudios Profesionales, Santo Domingo, to design, test, and evaluate an experimental technical-vocational system of supervised open education for high-school graduates from the academic stream and for high-school drop-outs. \$123 000 — 34 months.

89-0073 Contract farming and outgrower schemes (Uganda)

For Makerere University, Kampala, to enable the Makerere Institute of Social Research to assess the experience of contract farming and outgrower schemes, particularly with respect to smallholder welfare and agricultural development policy. \$45 300 — 18 months.

89-0076 Workers' education (Uganda)

To enable the Centre for Basic Research, Kampala, to design, prepare, and apply a set of adult-education modules addressing issues relevant to educating workers in labour organizations. \$120 790 — 18 months.

89-0077 Conservation and development of the Mount Everest ecosystem (China-Nepal)

For the Woodlands Mountain Institute, USA, to enable the Task Force for the Makalu-Barun Extension of Sagarmatha National Park, Kathmandu, and the Working Commission on Qomolangma Nature Preserve, Beijing, to extend, on the Nepal side, the existing park around Mount Everest to include a much larger, sparsely populated area with some seasonal use and to create a national park on the Tibetan side of the border. \$228 980 — 20 months.

⁹ Projects funded jointly with another division are listed under "Multidivisional."

89-0079 Educational Research Network of Eastern and Southern Africa (Kenya)

For Kenyatta University, Nairobi, to enable the Educational Research Network in Kenya to strengthen cooperation between researchers and research institutions in that country and to revive its affiliation with the Educational Research Network of Eastern and Southern Africa. \$26 460 — 24 months.

89-0096 Access by the urban poor to services: developing action-oriented policies (Global)
To enable the World Bank, USA, to determine more effective ways for the urban poor to have access to basic services and to highlight the problems encountered and policy issues involved in securing such access. \$58 200 — 6 months.

89-0102 Technology policy research network (eastern and southern Africa) — Phase III

For IDRC, Kenya, to strengthen the East African Technology Policy Studies network as a mechanism for facilitating an exchange of ideas, experience, and results among researchers and for encouraging collaboration between researchers and policymakers. \$215 480 — 36 months.

89-0103 Technology policy research network (West Africa) — Phase II

For IDRC, Kenya, to generate information usable in designing and implementing future policy or in identifying and assessing the impact of existing policy and to strengthen the West African Technology Policy Studies Network as a mechanism for fostering collaboration between policy researchers and policymakers in the region. \$215 480 — 36 months.

89-0104 Comparative evaluation of regional development in ASEAN countries (Southeast Asia)

For the University of the Philippines' Planning and Development Research Foundation, Quezon City; the Universitas Indonesia, Jakarta; and the Thai University Research Association, Bangkok, to assess the regional development experience in their respective countries over the past 15 years through case studies with a view to possible reformulation of regional policy and projects in the 1990s. \$155 985 — 24 months.

89-0107 Human development and family studies network (India)

For the Maharaja Sayajirao University of Baroda, Vadodara, to

enable the Department of Child Development to establish a centre for research coordination and consultative services in human development and family studies. \$84 000 — 24 months.

89-0117 Economic policy and income distribution (Chile)

For the Corporación de Investigaciones Económicas para Latinoamérica, Santiago, to develop new knowledge about the behaviour of Latin American economies and to apply this knowledge to influence economic policies in Chile. \$419 700 — 24 months.

89-0120 Education research network in West and Central Africa

For the Université nationale du Bénin, Togo, to develop a network for education research in West and Central Africa with a view to improving the effectiveness of education in the region and enhancing its responsiveness to an increasingly constrained socioeconomic environment. \$328 470 — 24 months.

89-0121 Maternal mortality (West Africa)*

For the Direction de la statistique, Burkina Faso; the Association congolaise pour le bien-être familial, Congo; the Ministère de la santé publique et des affaires sociales, Mali; and the Centre africain d'études supérieures en gestion, Senegal, to establish a network to provide the various assessment factors that will help reduce maternal morbidity and mortality. \$360 670 — 24 months.

89-0126 Unregulated housing submarket in Ahmedabad (India)

To enable the Ahmedabad Study Action Group to document the processes inherent in the operations of the unregulated housing submarket in the city of Ahmedabad and to disseminate the findings through five workshops. \$37 030 — 18 months.

89-0127 Informal sector (Sri Lanka)

To enable the Marga Institute, Colombo, to study the informal production sector in the urban economy with the objective of identifying its potential for increasing productivity, generating income and employment, and absorbing technology at relatively low levels of capital expenditure. \$60 470 — 28 months.

89-0129 Urban passenger transport in Lagos (Nigeria)*

For Obafemi Awolowo University, Ile Ife, to enable the Department of

Economics to contribute to the formulation of an urban transport policy by systematically analyzing the organization, operations, and efficiency of informal modes of public transport, using Lagos as a case study. \$32 450 — 24 months.

89-0130 Traditional credit associations (Cameroon)*

For the Centre Universitaire de Douala, to enable the École supérieure des sciences économiques et commerciales to study the *tonines* or rotating credit associations and the possibility of making them more reliable by legal and regulatory means. \$29 330 — 24 months.

89-0135 Infant mortality data for policy monitoring in the Brazilian Northeast

To enable the Fundação Sistema Estadual de Analise de Dados, São Paulo, to conduct research on the application and adaptation of a new demographic method (the "previous child method") to monitor infant-mortality levels and specific health programs. \$176 255 — 24 months.

89-0137 Rural organizations and participation (Sierra Leone)

For the University of Sierra Leone, Freetown, to enable the Department of Agricultural Economics of Njala University College to analyze the factors, conditions, and problems affecting existing local organizations in rural areas, particularly the extent to which they do and could involve the rural poor in development. \$55 590 — 24 months.

89-0138 Small research grants (eastern Africa) — Phase VI

To enable the Organization for Social Science Research in Eastern Africa, Ethiopia, to continue providing small grants for training and research in social science to further the objectives of earlier IDRC support and to consolidate its results. \$220 000 — 24 months.

89-0142 External competitiveness in Moroccan industry

To enable the Centre d'études et de recherche Aziz Belal, Rabat, to contribute to the optimization of the government's intervention program for industrial development by analyzing the results of industrial policy since the introduction of the structural adjustment program. \$156 220 — 24 months.

89-0152 Low-cost housing and social promotion in Abidjan (Côte d'Ivoire)

For the Université d'Abidjan to

enable the Centre de recherches architecturales et urbaines to study the impact of the government's intervention program on urban shelter by means of a survey of 1 000 households, half of which are owner-occupied and the other half rented. \$58 360 — 18 months.

89-0154 Property tax revenues for local governments (Nigeria)
For Obafemi Awolowo University, Ile Ife, to enable the Department of Public Administration to examine and document some of the most successful strategies for dealing with the problems of property taxation drawing on the experience of 10 cities in Nigeria and other African countries. \$99 800 — 24 months.

89-0160 Rethinking the Latin American city — Phase II
To enable the Instituto Internacional de Medio Ambiente y Desarrollo—América Latina, Argentina, to understand how Latin American cities are built, administered, and maintained; to identify available local resources for these purposes; and to develop a set of policy proposals on how governments and international agencies can more effectively address the problems of urbanization in the region. \$128 160 — 24 months.

89-0176 Information and research centre on climate change (South Asia)*
To enable the Tata Energy Research Institute, India, to establish a centre to collect, develop, and disseminate information on the social impact of climatic change in South Asia, with special attention to gender aspects. \$160 350 — 36 months.

89-0177 Conditions of life in the urban-migrant hostels of Cape Town (South Africa)
For the University of Cape Town to enable the Department of Social Anthropology to document the conditions of life in the urban council-built hostels of Cape Town and to provide the hostel dwellers with the necessary data to campaign for improved living conditions. \$10 620 — 12 months.

89-0178 International return migration to Egypt
For the American University in Cairo to enable the Social Research Center to measure and analyze the social and economic impact of return migration on migrant and nonmigrant families. The results will eventually help in formulating comprehensive policies for a better social and economic integration of the returnees into

Egyptian society. \$50 560 — 24 months.

89-0183 Macro policy study on small-scale enterprise development for the Philippine government
For Appropriate Technology International/Philippines, Metro Manila, to enable the Congressional Economic Planning Staff to produce an integrated national policy on small-scale enterprise development for passage by the Philippine Congress. \$47 310 — 12 months.

89-0186 The Inca region: development potential and constraints (Peru)
To enable the Centro de Estudios Rurales Andinos "Bartolomé de las Casas," Cusco, to assess the socioeconomic development potential and constraints of the Inca region, and to formulate guidelines for an appropriate and sustainable regional development plan. \$86 780 — 18 months.

89-0192 Export revenue management (Latin America)
For the Centro de Estudios de la Minería y el Desarrollo, Bolivia; the Corporación de Investigaciones Económicas para Latinoamérica and the Centro de Estudios del Cobre y la Minería, Chile; and the Grupo de Análisis para el Desarrollo, Peru, to study the effects of export-revenue instability on the economies of developing countries to devise policies to minimize the cost of price fluctuations in primary commodities on the international market. \$353 390 — 24 months.

89-0194 National household literacy survey (People's Democratic Republic of Yemen)*
To enable the General Directorate for Literacy and Adult Education, Aden, to develop a survey instrument for measuring literacy with special consideration given to linking the output data directly into the national education-planning process and to building the national capacity to conduct and use similar surveys. \$80 190 — 12 months.

89-0197 Strengthening population research capability (Indonesia)
To enable Universitas Hasanuddin, Ujung Pandang, to enable the Population and Studies Centre to develop a low-cost research-methodology training package for researchers and planners whose responsibilities relate to population research and policy issues in the five eastern provinces of Indonesia. \$170 050 — 36 months.

89-0198 Human settlements and sustainable development (Global)
For the University of Toronto, Canada, to enable the Centre for Urban and Community Studies to promote international discussion on, and understanding of, the relationship between human settlements and sustainable development by financing six regional papers prepared by leading researchers from developing countries. \$53 120 — 12 months.

89-0199 Managing the urban informal sector (Thailand)
For the National Economic and Social Development Board, Bangkok, to enable the Thailand Development Research Institute to identify practical policies for solving basic problems faced by workers in the urban informal sector, particularly those associated with their employment situation. \$88 190 — 12 months.

89-0201 Industrial organization of the vegetable-oils sector (Kenya)
For Egerton University, Njoro, to enable the Department of Economics, Kenyatta University, to study the supply of and demand for edible vegetable oils and fats and the structure and performance of the processing industry so as to identify policy interventions aimed at increasing domestic production. \$72 990 — 24 months.

89-0224 No dumping here: control of pesticides in developing countries (Global)
For the Environmental Liaison Centre International, Kenya, to provide support for, and to coordinate the efforts of, a group of nongovernmental organizations in four countries that will examine national pesticide markets in developing countries. \$107 026 — 18 months.

89-0232 Indigenous culture and health-services use among Indian migrants (Guatemala)*
To enable the Universidad del Valle de Guatemala to determine the extent to which Indian families use health services for children 0–5 years of age, the importance of selected sociocultural factors in inhibiting full use of health services, and the way traditional beliefs, practices, and personnel might be incorporated into the health-care system. \$53 100 — 12 months.

89-0245 Educational equality and democracy (Chile) — Phase III
To enable the Centro de Investigación y Desarrollo de la Educación, Santiago, to continue an integrated

program of education research, extension, and dissemination, and, thereby, to respond to the challenges the country faces as a result of current sociopolitical, economic, and cultural changes. \$140 000 — 24 months.

89-0254 Socioeconomic impacts of mangrove resource over-exploitation (the Philippines)

To enable the University of Eastern Philippines Research and Development Foundation Inc., Samar, to formulate workable conservation-intervention programs and policies to ensure the long-term efficient use and management of mangrove resources. \$39 400 — 24 months.

89-0264 Economic policy reform and environmental management (eastern and southern Africa)*

To enable the African Centre for Technology Studies, Kenya, to study the interrelationships between economic reform and environmental management, to direct policy-making toward long-term sustainable development, and to build relevant policy-research capability in sub-Saharan Africa. \$192 980 — 18 months.

89-0269 Evaluation of distance education programs (Dominican Republic)

To enable the Centros APEC de Educación a Distancia, Santo Domingo, to carry out a systematic assessment of the educational, social, and economic impact of the distance education programs for secondary education on the graduates of the APEC centres in the Dominican Republic. \$57 840 — 12 months.

89-0273 Science teaching in Côte d'Ivoire: approaches, problems, and perspectives

For the Université d'Abidjan to enable the Centre ivoirien de recherches économiques et sociales to study the constraints to teaching science in the schools and the interaction between science-technology and society. \$38 000 — 24 months.

89-0278 Mountain off-farm employment (Nepal)

For the International Centre for Integrated Mountain Development, Kathmandu, to develop and apply a comprehensive analytical framework to assess crucial issues and options in off-farm employment in the Hindu Kush-Himalaya region of China, Nepal, and Pakistan. \$246 500 — 20 months.

89-0288 Local government issues (South Africa-Zimbabwe)*

For the University of the Western Cape, Bellville, and the University of Zimbabwe, Harare, to provide an analysis of, and guidelines for, the restructuring of local government systems in postapartheid South Africa and revision or modification to local government in the case of Zimbabwe. \$592 740 — 24 months.

89-0294 Alternatives in nonformal education for preschool children (Colombia)

To enable the Centro de Investigación y Desarrollo Infantil, Bogotá, to plan, implement, and evaluate an alternative community-based program for preschool education by developing a set of learning materials to stimulate child development through the use of games in rural areas where no formal preschool services are available. \$94 320 — 18 months.

89-0297 Flood hazard minimization: Kano Plain (Kenya)*

To enable Kenyatta University, Nairobi, to investigate the nature and extent of the flood hazard in the Kano Plain and examine nonstructural measures to minimize flood losses (flood proofing, flood-warning systems, etc.). \$51 840 — 15 months.

89-0301 BOLESWA research awards program (Botswana-Lesotho-Swaziland) — Phase II*

To enable the Botswana Educational Research Association, Gaborone; the Lesotho Educational Research Association, Maseru; and the Swaziland Educational Research Association, Luyengo, to continue to enhance educational research capacity in their respective countries. \$149 550 — 24 months.

89-0302 Evaluation of school network sufficiency (Yemen Arab Republic)

To enable the Educational Research and Development Center, San'a, to identify the gap between the supply and demand for educational services, to evaluate the quality of educational services at all levels of formal education, and to propose a program capable of meeting both the growing social demand for education and the needs of sustainable economic development. \$145 200 — 24 months.

89-0303 Reforming the national income accounts in the fishery sector (Costa Rica)*

To enable the Tropical Science Center, San José, to develop a method of preparing national

economic accounts that treats national resource assets, in this case fish stocks, consistently with other tangible capital so that resource depletion is recorded as capital consumption rather than income. \$33 370 — 12 months.

89-0306 Inventory of social science research on the environment (Brazil)

To enable the Universidade de São Paulo, Brazil, to create an inventory of existing social science research undertaken by universities, nongovernmental organizations, and government institutions on environmental issues. \$55 000 — 12 months.

89-0310 Poverty alleviation programs and macro policies (India)*

To enable the Institute of Development Studies, Bapu Nagar, to assess existing information on poverty-alleviation programs in different states of India with a view to formulating more successful policies and programs. \$44 680 — 24 months.

89-0311 Interest rate and flow of funds (Nepal)*

To enable the Institute for Development Studies, Kathmandu, to assist the government, the central bank, and national financial institutions to achieve more effective mobilization and more efficient allocation of financial resources. \$36 600 — 19 months.

89-0313 Chemical fertilizer marketing and distribution (Thailand)

For the Thai University Research Association, Bangkok, to enable the Faculty of Economics of Chulalongkorn University to recommend measures to make standard quality chemical fertilizers available to Thai farmers at a reasonable price and in sufficient quantity to improve their yields. \$50 320 — 12 months.

89-0321 Industrial policy and business reaction (Argentina)*

To enable the Centro de Investigaciones Sociales sobre el Estado y la Administración, Buenos Aires, to analyze the development of several leading industrial enterprises and formulate suggestions on economic policy taking into account the strategies adopted by the enterprises in the course of their historical evolution. \$71 440 — 24 months.

89-0322 Structural adjustment and the manufacturing sector (Guyana)*

To enable the Department of International Economic Cooperation, Georgetown, to provide a detailed analysis on all aspects and policies related to the development of the manufacturing sector from 1966 to 1988. \$39 800 — 12 months.

89-0328 Computers in Kenya's secondary schools: case study of an innovation in education — Phase III

To enable the Research and Evaluation Associates, Nairobi, to study the financial implications of computers in schools — in particular, the role of donors in the initial stages and the subsequent ability (or inability) of schools and communities to sustain the innovation in the context of resource constraints. \$93 700 — 24 months.

89-0331 Impact of decentralization on rural poverty (Asia)*

To enable the Centre on Integrated Rural Development for Asia and the Pacific, Bangladesh, to examine the socioeconomic impact of decentralization programs on the rural poor in Bangladesh, India, Nepal, Sri Lanka, and Thailand and find out the extent to which the rural poor participated in the planning and implementation of such programs. \$56 030 — 18 months.

89-0338 Structural adjustment and agrarian crisis in Africa*

To enable the Council for the Development of Economic and Social Research in Africa, Senegal, to study the effects of macroeconomic policies, particularly structural adjustment, on agriculture. \$230 000 — 42 months.

89-1005 Alternatives to cyanide use in the aquarium industry (the Philippines-Canada)

For the Haribon Foundation for the Conservation of Natural Resources, Manila, in collaboration with the International Marine Life Alliance, Quebec, to test a method for teaching sustainable techniques to artisanal fishermen harvesting aquarium fish from coral reefs and to identify options for diffusing the method throughout the Philippines, thereby supporting the government's efforts to combat destructive fishing practices. \$172 930 — 12 months.

89-1013 Foreign trade (China-Canada)

For the Ministry of Foreign Economic Relations and Trade,

Beijing, and the Institute for Research on Public Policy, British Columbia, to complete studies on economic development issues in the coastal region; the role of foreign trade in the development of the Chinese economy; China's commodity strategy; the reform of China's foreign-trade system; China and the multilateral trade negotiations; prospects for economic cooperation between China and other countries; and institutional aspects of China's foreign-exchange market. \$147 465 — 12 months.

89-1015 Export-only industries (Tunisia-Canada)

For the Agence de promotion de l'industrie, Tunis, and the University of Sherbrooke, Quebec, to increase the Tunisian government's knowledge of a sector considered to be a priority and to help improve policies for its promotion. \$36 370 — 9 months.

89-1020 Women and development workshop (Global-Canada)

For Laval University, Quebec, to enable the Laboratoire de recherches anthropologiques to teach a conceptual apparatus and a research method on women in development to understand the reality of women and to improve the planning of development policies. \$113 235 — 12 months.

89-1031 Macroeconomic management (Tanzania-Canada) — Phase II*

For the University of Dar es Salaam and the University of Toronto, Ontario, to improve and update the supply-constrained macro-econometric model for use in macroeconomic policy simulations to assist policymakers particularly in the Planning Commission, the Central Bank, and the ministries of Finance, Trade and Industries, and Agriculture. \$180 795 — 24 months.

89-1033 Debt-trade bargaining (Global-Canada) — Phase III

To enable the Facultad Latinoamericana de Ciencias Sociales, Argentina, and the North-South Institute, Ontario, to examine two aspects of global trade bargaining, specifically, the political and economic determinants of trade bargaining by particular developed countries vis-à-vis developing countries, and to compare the trade-bargaining strategies used by developing countries. \$210 670 — 24 months.

89-1034 Migrant labour (South Africa-Canada)*

For the University of Cape Town and

Queen's University, Ontario, to provide a critical analysis of state and company policies toward migrant mine workers on accommodation issues, and to generate information and analysis that will contribute to the abolition of the repressive institutions of migrant labour and the compound system. \$88 800 — 12 months.

89-1041 Documentation and application of traditional environmental knowledge (Global-Canada)

To enable the Dene Cultural Institute, Canada, to provide a forum for information exchange among researchers currently documenting and applying traditional environmental knowledge of aboriginal peoples in the Pacific Islands, Sahelian Africa, and the Canadian North in the context of natural resource management and local formal and informal education. \$74 200 — 12 months.

Special Program Activities¹⁰

89-0095 Social participation of women (Chile)

For the Centro de Indagación y Expresión Cultural y Artística, Santiago, to identify ways in which the mass media play a role in legitimizing and reinforcing negative images with respect to the participation of women in national development. \$50 970 — 24 months. SS.

89-0167 The contribution of Caribbean men to the family

For the University of the West Indies, Jamaica, to enable the Caribbean Child Development Centre to study the behaviour and attitudes of Jamaican men toward family responsibilities. \$67 780 — 18 months. SS

89-0229 Rural development and nutrition (Bénin)*

For the Université nationale du Bénin, Cotonou, to enable its health sciences faculty to study, with assistance from the community, problems related to the undermining of food security and the constraints to and opportunities for the development of intersectoral activities to

¹⁰ For each project, the administering division is given: AFNS = Agriculture, Food and Nutrition Sciences; EES = Earth and Engineering Sciences; HS = Health Sciences; and SS = Social Sciences.

promote food security. \$147 000 — 12 months. AFNS.

89-0260 Women and land tenure ownership (Senegal)*

For the Université Cheikh Anta Diop, Dakar, to enable the Institut fondamental Cheikh Anta Diop to examine the situation of women in rural areas where different customary laws coexist with state legislation and to understand the implications of a dual system for women's social status in general and land ownership in particular. \$41 040 — 18 months. SS.

89-0261 Women's land rights (China)*

To enable Disha, India, a registered charitable trust, to examine land reform in China during the past 40 years focusing on the extent to which women have acquired land rights as the result of land redistribution policies enacted after 1949. \$50 680 — 18 months. SS.

89-0299 Resources of women farmers (Thailand)*

For the Ministry of Agriculture and Cooperatives, Bangkok, to enable the Farming Systems Research Institute and the Prince of Songkla University to use a farming systems approach to identify the needs of women farmers in southern Thailand and options for increasing their access to and control of resources. \$64 470 — 24 months. AFNS.

89-0316 Urban food security (Central America)*

To enable the International Food Policy Research Institute, USA, to develop operational paradigms for strengthening development efforts at the grassroots level and top-down policy formulation and development planning, particularly as these affect the food security, health, and nutrition of the urban poor. \$126 900 — 12 months. HS.

89-0341 Women's knowledge, management, and control of seed genetic resources (Ghana)*

To enable the University of Ghana, Legon, to study the extent of knowledge women possess on seed genetic resources, how this information is passed from generation to generation, and the impact on small-scale agriculturalists of the patenting of new improved seeds by multinational companies. \$43 350 — 16 months. SS.

89-0344 Economic role of women in the cocoa industry (Nigeria)*

To enable the Nigerian Institute of Social and Economic Research,

Ibadan, to determine women's contribution to cocoa production and marketing in southwest Nigeria with a view to proposing policy measures that will enhance and sustain their contribution and ensure a flow of benefits to female farm workers. \$20 140 — 24 months. SS.

89-1004 Institutional support for the International Division of the AUCC (Global)

To enable the Association of Universities and Colleges of Canada (AUCC) to maintain its activities aimed at increasing the role and participation of Canadian universities in international cooperation and development. \$88 524 — 12 months. EES

89-1044 Discrimination and gender (India-Canada)*

To enable the National Law School of India, Bangalore, and York University, Ontario, to examine the conflicts and constraints of equality claims raised by women within different religious communities in India. \$55 365 — 24 months. SS.

Division activity projects

Apart from the activities described in the preceding pages, IDRC funds several relatively small-scale projects designed to support, in one way or another, the activities in progress in the divisions. These are such things as promoting workshops or seminars on the research priorities in a given region or topic, enabling researchers from developing countries to participate in meetings of experts in various parts of the world, or making it possible for specialists to visit and assist a project team in another country. There are also funds available to IDRC's regional offices to support activities in their respective regions. Most division activity projects cover the cost of meetings or of consultations directly or indirectly connected with IDRC-funded research. The following are examples:

- A study was supported to determine the feasibility of using radio or a combination of radio and other communications media to disseminate agricultural research findings to small-scale farmers in Kenya.
- In Nepal, a National Seminar on the "Role of Communication for Basic Needs" was funded in collaboration

with the Ministry of Communications of His Majesty's Government of Nepal and the Royal Nepal Academy of Science and Technology.

- Two Sri Lankan consultants evaluated information activities in Sri Lanka to assess the impact of past efforts and help determine the direction of future program development.
- A consultant undertook a comprehensive approach to auditing information requirements in national disaster-preparedness planning and management in the developing countries of Asia.
- Several divisions combined resources to support a visit by three Canadian university professors to Makerere University in Uganda to assess the research, training, and teaching needs of the social sciences faculty and the Makerere Institute of Social and Economic Research.
- Support was provided for a meeting of 12 researchers from East, West, and southern Africa to discuss issues of African women's access to land under statutory and customary law.
- In Zambia, because of the economic crisis characterized by high inflation, scarcity of essential commodities, and personal hardship, many of the educated elite are leaving the country. A small project was developed to enable the Education Research Bureau of the University of Zambia to survey research institutions and the University to document the phenomenon and to explore various incentive systems used in neighbouring countries to counter the "brain drain."
- An analysis of the Pearson Fellowships Program, which was instituted in 1977, was made to generate the data needed to assess the impact of this program as well as to make any needed qualitative changes.
- A 3-day workshop entitled "Essential National Health Research for Egyptian and Middle East Researchers and Health Services Providers" was held in Egypt. Participants were invited from Egypt, Iraq, Jordan, Morocco, Syria, and Yemen. The workshop was organized to familiarize participants with the concept of essential health research.

- A short study was supported to elucidate and confirm the diagnostic potential of low, intraocular pressure for early diagnosis of family contact leprosy. It would be a simple, safe, and noninvasive field technology, likely to be the first satisfactory method for early diagnosis of this disease.
- The Chemical Engineering Institute at the Universidad de la República in Uruguay has undertaken a diagnostic study of the local tanning industry, with a special emphasis on small- and medium-size enterprises. In addition to defining processing problems, the study is also looking at the structure and characteristics of this industry, which represented 12% of the total industrial exports in 1985.
- A review of all projects funded by the Earth and Engineering Sciences Division in the foundry sector, especially in Latin America, has been undertaken by a Canadian consultant to assess the outcome of these projects and to recommend further researchable issues in this important industrial sector in several developing countries.
- A consultant identified and evaluated Canadian expertise — in universities, federal research laboratories, and private biotechnology companies — in biotechnology with potential application in agriculture, forestry, and fisheries in developing countries.
- A series of studies were undertaken by consultants to determine the state-of-the-art of biotechnology research in IDRC's target regions.

Fellowships

Pearson fellowship

Pearson fellows undertake a program of academic study focusing on public administration and management at the Faculty of Administration of the University of Ottawa and School of Public Administration of Carleton University, Ottawa, ON, Canada, with practical attachment with a government department.

Adan, Zeinab Yusuf Haji (Somalia)
Present position in home country: Laboratory Manager and Assistant Director — Quality Control and Milk Procurement, Mogadisho Dairy Plant

Agbaje, Arthur (Sierra Leone)
Present position in home country: Deputy Director, Ministry of Mines, Geological Survey Department

Amoah, Kobina (Ghana)
Present position in home country: Senior Economic Planning Officer, Investments and Project Analysis Division, Ministry of Finance and Economic Planning

Chatterjee, Rachel (India)
Present position in home country: Joint Development Commissioner — Handlooms, Ministry of Textiles

Dilla, Humberto Aroldo (Cuba)
Present position in home country: Scientific Researcher, Centro de Estudios Sobre América

Epino, Agnes Padilla (the Philippines)
Present position in home country: Assistant Director, Office of Career Systems Standards, Civil Service Commission

Eteki, Marie-Louise (Cameroon)
Present position in home country: Assistant Chief, Planning and Reconstruction Agency for North-West Yaoundé, Ministry of Urban Planning and Housing, Working Group on Urban and Rural Lands Planning and Services

Lertsuridej, Prommin (Thailand)
Present position in home country: Director of Nongsonghong Community Hospital, Office of the Permanent Secretary for Public Health

Mahlatsi, Lisebo Alina (Lesotho)
Present position in home country: Senior Planning Officer, Health Planning and Statistics Unit, Ministry of Health

Morelli, Jorge Eduardo (Peru)
Present position in home country: Executive Secretary, Social Economic Research, Instituto De Estudios Alberto Ulloa

Mwiyeriwa, Chrissie Nancy (Malawi)
Present position in home country: Deputy Program Manager, Agricultural Development Division, Ministry of Agriculture

Najera, Ruben Estuardo (Guatemala)
Present position in home country: Advisor, Department of Science and Technology, Permanent Secretariat of the General Treaty on Central American Economic Integration

Pangastuti, Sri (Indonesia)
Present position in home country: Chief of Health Services for Government Employees Section, Directorate of Community Participation, Ministry of Health

Rahman, Hamidur Md. (Bangladesh)
Present position in home country: Assistant Chief — Agriculture Division, Planning Commission, Ministry of Planning

Rodríguez, Armando Agustín (Nicaragua)
Present position in home country: General Director, Secretaría de Planificación y Presupuesto, Instituto Nacional de Estadísticas y Censos

Shrestha, Ramesh L. (Nepal)
Present position in home country: Section Officer, Foreign Aid Coordination Division, Ministry of Finance

Swarup, Asha (India)
Present position in home country: Deputy Secretary/Director — Rural Development, Planning Commission of India

Wu, Han (China)
Present position in home country: Deputy Section Chief, Science and Technology Development Section, Guangdong Provincial Science and Technology Commission

Program-related award

Andrade, Beatriz O. (Colombia)
Undertake a training course on working conditions on health; División de Ciencias Biológicas,

Universidad Autónoma Metropolitana, México, DF, Mexico

Arroyave, Maria Elena (Colombia)
Undertake graduate studies leading to a master's degree in epidemiology; McGill University, Montreal, PQ, Canada

ASEAN Training Center for Primary Health Care Development
To permit two participants to attend the international training program on planning and management for health and development [Khan, Outhene Vongsyprasom (Laos); Outhone, Anothay (Laos)]; ASEAN Training Center for Primary Health Care Development, Nakhon Chaisri, Thailand

Basiao, Zubalda (the Philippines)
Undertake a doctoral degree in biology, specifically in the area of fish genetics; Department of Biology, Dalhousie University, Halifax, NS, Canada

Betancourt, Oscar (Ecuador)
Undertake a training course on working conditions and health; Universidad Autónoma Metropolitana, México, DF, Mexico

Bhuj, Dinesh Raj (Nepal)
Support attendance at the regional workshop on community broadcasting and new technologies; Asia-Pacific Institute for Broadcasting Development, Penang, Malaysia

Bustamante, Cristian (Chile)
Participate in the training course on working conditions and health; Universidad Autónoma Metropolitana, México, DF, Mexico

Consejo Superior Universitario Centroamericano (Costa Rica)
Enable seven students to undertake studies toward a master's degree in sociology [Castro Valverde, Carlos (Costa Rica); Garay, Carolina Icabalzeta (Nicaragua); González, Carlos Ramos (El Salvador); Gutiérrez Andrade, María Jesús (Honduras); Povedano, Silvia Lara (Costa Rica); Román Vega, Isabel (Costa Rica); Solís, Mario Alas (Honduras)]; Consejo Superior Universitario Centroamericano, San José, Costa Rica

Castro Bonilla, Myriam (Honduras)
Undertake studies toward a master's degree in information sciences; Universidad Simón Bolívar, Caracas, Venezuela

Dschang University Centre (Cameroon)

Enable five candidates to undertake research work for the preparation and presentation of their theses; Dschang University Centre, Dschang, Cameroon

Centro de Investigación y Capacitación en Acuicultura (Brazil)

Allow 15 professionals to attend the fourth course organized by CEPTA on Técnicas de Reproducción, Larvicultura y Alevinaje de Peces [Alva, Guillermo T. (Peru); Chaparro, Nicholas (Colombia); Delgado, Penelope (Ecuador); Eraso, Andrés (Colombia); Grajales, Alberto (Colombia); Lopez, Ricardo (Colombia); Paz, Alberto O. (Chile); Rodriguez, Gladys J. (Panama); Salazar, Jose Miguel (Venezuela); and six others]; Centro de Investigación y Capacitación en Acuicultura, Pirassununga, Brazil

Centro Rosarino de Estudios Perinatales (Argentina)

Enable seven physicians to undertake a graduate training program for research in social aspects of perinatology [D'Agostino, Mario; Di Monaco, Rene Alberto; Lardizabal, Jaime Luis; Nardin, Carlos Alberto; Paciocco, Miguel; Velasco, Ricardo Jose; Zasfora, Calixto]; Centro Rosarino de Estudios Perinatales, Rosario, Argentina

Chica, Ricardo (Colombia)

Complete the writing of a thesis toward a doctoral degree in economics; Faculty of Economics, University of Cambridge, Cambridge, UK

Chitrakar, Roshan (Nepal)

Undertake a doctoral degree in education specializing in educational planning; University of Alberta, Edmonton, AB, Canada

Cisse, Moussa Kola (Senegal)

Attend a research management workshop; University of Manitoba, Winnipeg, MB, Canada

Coulibaly, Souleymane (Ethiopia)

Undertake studies leading to a master's degree in geological sciences; Isotopic Geochemistry and Geochronology Research Centre, University of Quebec in Montreal, Montreal, PQ, Canada

Cuenca, Julio Cesar (Mexico)

Undertake studies toward a master's degree in seismology; Universidad Nacional Autónoma de México, México, DF, Mexico

De la Cruz, Quirino (the Philippines)

Undertake a doctoral degree in plant breeding; University of the Philippines, Los Baños, the Philippines

Diallo, Harouna Abdoulaye (Senegal)

Undertake certificate training leading to a program of studies in veterinary sciences; Université Cheikh Anta Diop, Dakar, Senegal

Doumbia, Edwige Joachim (Burkina Faso)

Undertake a master's degree in land use planning and regional development; Laval University, Quebec City, PQ, Canada

Ethangatta, Linda K. (Kenya)

Undertake doctoral degree studies in nutrition sciences; University of Alberta, Edmonton, AB, Canada

Fundación para la Educación Superior y el Desarrollo (Colombia)

Enable three economists to undertake an internship program for socioeconomic research [Alvear, Mario; Escobar, Jaime Humberto; Orbelaez, Maria Angelica]; Fundación para la Educación Superior y el Desarrollo, Bogotá, Colombia

Gunasekera, Rasanth M. (Sri Lanka)

Undertake a doctoral degree in zoology with specialization in fish nutrition; Department of Zoology, University of Singapore, Singapore

Houalakoue, Jean (Bénin)

Undertake, under the supervision of the ICCD, a theoretical and practical course of study leading to a journalism internship (specializing in scientific interpretive writing); International Centre of Communication for Development, Westmount, PQ, Canada

Kaendi, Joyce M. (Kenya)

Undertake doctoral studies in medical anthropology to strengthen the capacity of the Institute of Development Studies, University of Nairobi; University of California, Los Angeles, CA, USA

Keembiyahetti, Chitra (Sri Lanka)

Undertake training course on culture of natural food organisms; Southeast Asian Fisheries Development Center, Tigbauan, the Philippines

Kisanga, Aida U. (United Republic of Tanzania)

Undertake fieldwork for a doctoral degree in technology policy for building materials; Building Research

Unit, Ardhi Institute, Dar es Salaam, United Republic of Tanzania

Kone, Mamadou Ahmed (Senegal)

Undertake a master's degree in public communication with specialization in health and communication; Laval University, Quebec City, PQ, Canada

Lee, Soo-Ann (Malaysia)

Undertake a specifically tailored program of training in the safety aspects of pesticide application; Central Toxicology Laboratory, Cheshire, UK

Lio-Po, Gilda (the Philippines)

Undertake a doctoral degree in biology with specific reference to fish virology; Simon Fraser University, Vancouver, BC, Canada

Loh, Chi Leong (Malaysia)

Undertake a doctoral degree in microbiology and immunology; University of Ottawa, Ottawa, ON, Canada

Mabeza, Hlezipi (Zimbabwe)

Undertake a master's degree in agricultural economics (agrobusiness management option) to strengthen the capacity of the University of Zimbabwe for agricultural research; Department of Agricultural Economics, University of Manitoba, Winnipeg, MB, Canada

Manalo, Cynthia H. (the Philippines)

Undertake a master's degree program in agricultural economics with specialization in production economics; College of Economics and Management, University of the Philippines, Los Baños, the Philippines

Mbarga, Gervais (Cameroon)

Undertake a doctoral degree in the sociology of science and of scientific extension; Sociology Department, Laval University, Quebec City, PQ, Canada

Medialdia, Maria Theresa S. (the Philippines)

Undertake a master's degree in economics; Thammasat University, Bangkok, Thailand

Mlama, Penina (United Republic of Tanzania)

Support participation in the summer institute on gender and development; Saint Mary's University, Halifax, NS, Canada

Mourad, Amil (Morocco)

Undertake graduate studies leading to a doctoral degree in geology; Sciences Faculty, Université Cheikh Anta Diop, Dakar, Senegal

Muteshi, Jacinta K. (Kenya)
Undertake doctoral degree in education to strengthen the capacity of Kenyatta University relating to research and training in curriculum issues; Ontario Institute for Studies in Education, University of Toronto, Toronto, ON, Canada

Mwenesi, Leonard C. (United Republic of Tanzania)
Undertake a master's degree in visual arts and design; Department of Arts and Design, University of Alberta, Edmonton, AB, Canada

Nahar, Luftun (Bangladesh)
Undertake a master's degree program in sociology; University of Western Ontario, London, ON, Canada

Nhema, Alfred (Zimbabwe)
Undertake doctoral studies to strengthen the capacity of the University of Zimbabwe in research and training in public administration; Dalhousie University, Halifax, NS, Canada

Nkunzebose, Janvier (Burundi)
Undertake a diploma in documentation; Library Department, Université de Dakar, Dakar, Senegal

Okatcha, F.M. (Kenya)
Participate and learn from two conferences — 2nd Regional Conference of the International Association for Cross-Cultural Psychology and 1st European Congress of Psychology; International Association for Cross-Cultural Psychology, Amsterdam, the Netherlands

Okoth, Sheila (Kenya)
Support field work in Kenya on weed science and so strengthen the Botany Department; Botany Department, University of Nairobi, Nairobi, Kenya

Ould Mohamed, Cheikh S. (Senegal)
Undertake a certificate leading to a program of studies in veterinary sciences; Université Cheikh Anta Diop, Dakar, Senegal

Pocharawan, Padermchai (Thailand)
Undertake a master's degree program in farming systems; Chiangmai University, Chiangmai, Thailand

Rwakaikara-Abwoli, E.H.M. (Uganda)
Undertake a master's degree in clinical epidemiology; Department of Clinical Epidemiology and Biostatistics, McMaster University, Hamilton, ON, Canada

Santichai, Rungsiyapirom (Thailand)
Support participation in the integrated fish farming training course in China; Network of Aquaculture Centres in Asia — Regional Lead Centre in China, Wuxi, China

Tevera, Sipwe (Zimbabwe)
Undertake a master's degree in library and information sciences; School of Library and Information Sciences, University of Western Ontario, London, ON, Canada

Universidade Federal Santa Catarina (Brazil)
To support two candidates in completing the writing of their theses toward a master's degree in aquaculture [Fernandes, Wilson Marta (Brazil); Manzoni, Gilberto Caetano (Brazil)]; Universidade Federal Santa Catarina, Florianapolis, Brazil

Wai, Mar Mar (Burma)
Support a 9-month research and study program as a visiting fellow; Institute of Asian Studies, Chulalongkorn University, Bangkok, Thailand

Project-related award

Abdel Rahman, Abdel Kareem (Sudan)
Undertake a master's degree in library and information sciences; School of Library and Information Science, University of Western Ontario, London, ON, Canada

Ben Saad, Abdallah (Tunisia)
Undertake an internship on improving goat production; Arid Nations Institute, Tours, France

Ben Salem, Moktar (Tunisia)
Undertake a course leading to a degree in agropastoral studies for arid regions; National Centre of Agricultural Studies for Warm Regions, Montpellier, France

Chomba, Bernard (Zambia)
Undertake master's degree training to strengthen the capacity of the Forestry Department of the IDRC Fuelwood Project in Zambia; Faculty of Forestry, University of British Columbia, Vancouver, BC, Canada

Chunge, R.N. (Kenya)
Follow a course on epidemiology to strengthen the Kenya Medical Research Institute; McMaster University, Hamilton, ON, Canada

Del Valle, Jose (Chile)
Complete studies leading to a doctoral degree in food science;

Department of Food Science, University of Guelph, Guelph, ON, Canada

Diaw, Mariteuw Chimere (Senegal)
Undertake studies leading to a doctoral degree in anthropology; Laval University, Quebec City, PQ, Canada

Djigo, Abdoulaye (Senegal)
Support participation in an internship on biomedical equipment maintenance; Montpellier, France

Eita, Mahran (Egypt)
Support participation in the research management workshop; Research Management Workshop, University of Manitoba, Winnipeg, MB, Canada

El-Kholy, Mohamed Akmal (Ethiopia)
Undertake a doctoral degree and thus strengthen the Al-Azhar University in carrying out research in cytogenetics; International Livestock Centre for Africa, Addis Ababa, Ethiopia

African Institute for Economic and Social Development

Allow three students to undertake a program of studies in production and extension, to increase their knowledge of agricultural methods [Azoma, Komla (Togo); Dokpo, Kossi (Togo); Eklo, Kodjo (Togo)]; African Institute for Economic and Social Development, Abidjan, Côte d'Ivoire

Kiylapi, James L. (Kenya)
Undertake a master's degree in forestry; Department of Forestry, University of Toronto, Toronto, ON, Canada

Mbai, Crispin Odhlambo (Kenya)
Undertake a doctoral degree in development studies to strengthen the Kenya Medical Research Institute in carrying out research related to the implementation and management of health programs in Kenya; Kenya Medical Research Institute, Nairobi, Kenya

Mdcoe, Ntengua (United Republic of Tanzania)
Undertake doctoral studies to strengthen the capacity of Sokoine University to carry out livestock research; University of Reading, Reading, Surrey, UK

Michael, Benedict (United Republic of Tanzania)
Attend a course on information technology and computerized library services with special emphasis on water and sanitation; Asian Institute of Technology, Bangkok, Thailand

Investigación sobre las Culturas Indias, La Paz, Bolivia

Merette, Marcel M. (Canada, Montreal University)
Undertake a study entitled "Politiques d'ajustement de la balance des paiements : étude du cas du Brésil à l'aide d'un modèle calculable d'équilibre général," in fulfillment of the requirements for a doctoral degree; Universidade Federal de Pernambuco, Recife, Brazil

Montejo, Maria Elisa (Canada, Laval University)
Complete a research entitled "Femmes en milieu rural et idéologies : une comparaison Mexique-Colombie," in fulfillment of a doctoral degree; Centro de Investigaciones Regionales, Universidad de Yucatán, Mérida, Mexico

Morin, Diane (Canada, Laval University)
Undertake research work on the relationship between hydro-agricultural projects and schistosomiasis in Mali; National Institute of Public Health Research, Bamako, Mali

Pigott, Catherine (Canada, *The Whig Standard*)
Undertake research on Benazir Bhutto's personality and leadership as they affect grassroots development and the status of women; *Pakistan Times*, Islamabad, Pakistan

Riley, Evelyn Marie (Canada, Simon Fraser University)
Investigate the potential of traditional media for communication development in rural Ghana; School of Communication Studies, University of Ghana, Legon, Ghana

Rizk, Nagla (Canada, McMaster University)
Undertake research on "Comparative advantage, economic efficiency, and research and development: the case of Egypt — a sectoral perspective" in partial fulfillment of the requirements for a doctoral degree in economics; Department of Economics, American University in Cairo, Cairo, Egypt

Saleh, Walid (Canada, Concordia University)
Undertake research to develop a numerical model on groundwater recharge for semi-arid land; Faculty of Agriculture, University of Jordan, Amman, Jordan

Salinas, Bertha (Canada, Montreal University)
Undertake research on the popular

education movement in Latin America focusing on the values, strategies, and tactics in Mexico City; Centro de Estudios Educativos, México, DF, Mexico

St-Hilaire, Colette (Canada, Quebec University)
Undertake a study of feminism and development among the peasant women of the Philippines, in fulfillment of a doctoral degree in political science; Women's Resource and Research Center, Mary Knoll College Foundation, Quezón City, the Philippines

Technical University of Nova Scotia (Canada)
To provide support for two students to undertake research toward a master's degree [Corson, J. (Canada); Dartana, P. (Canada)]; Faculty of Architecture, Technical University of Nova Scotia, Halifax, NS, Canada

Gemini award

Montgomery, Susan E. (Canada)
Undertake an internship with the Gemini News Service with assignments and research in Namibia; Gemini News Services, London, UK

John Bene award

Rewald, Michael (York University, Canada)
Follow-up and disseminate the results of research on community forestry in tropical rainforests in Central America; Campo Experimental Forestal "San Felipe Bacalar," Chetumal, Quintana Roo, Mexico

Tracey, Jacqueline (University of British Columbia, Canada)
Pursue studies in Indonesia and collect information on the topic of plantations; University of Bangkor, Jakarta, Indonesia

Institutional-related award

Habib, Mervat Hishmat (Sudan)
Undertake a master's degree in library science relating to the development of a national information service and bibliographic data base; School of Library, Archival and Information Studies, University of British Columbia, Vancouver, BC, Canada

Kebede, Yohannes (Ethiopia)
Undertake doctoral studies in

agricultural economics; MacDonald College of McGill University, Sainte Anne de Bellevue, PQ, Canada

Kogi-Makau, Wambui (Kenya)
Support participation in the training course on public health nutritional epidemiology; University of Southampton, Hampshire, UK

Maaref, Moussa (Tunisia)
Undertake a master's degree in economics; Economics Research and Development Centre, Montreal University, Montreal, PQ, Canada

Rop, Isaac (Kenya)
Attend a 2-week course on statistical and economic analysis of fertilizer experimental data; International Fertilizer Development Center, Lomé, Togo

Shao, Ibrahim F. (United Republic of Tanzania)
Complete doctoral dissertation on rural financial credit institutions; Institute of Development Studies, Nairobi, Kenya

Toure, Alassane (Senegal)
Complete an internship in records management to increase the archival capabilities in the area of records management; Gestar Group, Montreal, PQ, Canada

Publications

IDRC publications

IDRC annual report 1988–1989 / Rapport annuel CRDI 1988–1989. IDRC-003/89e,f, 80 + 72 pp.

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Kogi-Makau, Wambui (Kenya)
Cours d'épidémiologie de la nutrition
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Maaref, Moussa (Tunisie)
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Cours de deux semaines sur l'analyse
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communautaire dans les forêts
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Études en Indonésie et collecte
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Université de Bangkor, Djakarta, Indonésie

Recherche sur la régénération des
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Recherche sur les méthodes
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- Kaendi, Joyce M.** (Kenya) Etudes de doctorat en anthropologie médicale pour renforcer les capacités de l'Institut des études du développement de l'Université de Nairobi; Université de la Californie, Los Angeles, CA, E-U
- Keebalyaheti, Chitra** (Sri Lanka) Cours sur la culture des organismes naturels pour l'alimentation; Centre de développement des pêches de de développement des pêches de
- Kisanga, Aida U.** (République-Unie de Tanzanie) Travaux pratiques en vue d'un doctorat en politiques technologiques concernant les matériaux de construction; Section de la recherche dans le domaine du bâtiment, Institut Ardhi, Dar es-Salaam, République-Unie de Tanzanie
- Kone, Mamadou Ahmed** (Sénégal) Etudes en vue d'une maîtrise en communication publique (type A — option santé et communication); Université Laval, Québec, QC, Canada
- Lee, Soo-Ann** (Malaisie) Programme individualisé de formation sur l'utilisation sécuritaire des pesticides; Laboratoire central de toxicologie, Cheshire, R-U
- Lio-Po, Gilda** (Philippines) Doctorat en biologie avec spécialisation en ichtyo-virologie; Université Simon Fraser, Vancouver, BC, Canada
- Loh, Chi Leong** (Malaisie) Immunologie; Université d'Ottawa, Ottawa, ON, Canada
- Mabenza, Hiezipl** (Zimbabwe) Maîtrise en économie agricole (option gestion des complexes agro-industriels) pour renforcer les capacités de l'Université du Zimbabwe en matière de recherche agricole; Département d'économie agricole, Université du Manitoba, Winnipeg, MB, Canada
- Manalo, Cynthia H.** (Philippines) Maîtrise en économie agricole (économie de la production); Collège d'économie et de management, Baños, Philippines
- Mbarga, Gervais** (Cameroun) Doctorat en sociologie de la science et de la vulgarisation scientifique; Département de sociologie, Université Laval, Québec, QC, Canada
- Medialia, Maria Theresa S.** (Philippines) Maîtrise en économie; Université Thammasaat, Bangkok, Thaïlande
- Mima, Penina** (République-Unie de Tanzanie) Programme de l'Institut de cours d'été sur le rôle des sexes et le développement; Université Saint Mary's, Halifax, NS, Canada

Bourses

Bourses Pearson

Les titulaires d'une bourse Pearson entreprennent un programme d'études en administration publique et en gestion à la Faculté d'administration de l'Université d'Ottawa et à l'École d'administration publique de l'Université Carleton, Ottawa, ON, Canada; ils font un stage pratique dans un ministère du gouvernement. *Poste actuel dans le pays d'origine :* chef de laboratoire et directeur adjoint, contrôle de la qualité et approvisionnements en lait, usine laitière, Mogadisho

Agbaje, Arthur (Sierra Leone) *Poste actuel dans le pays d'origine :* sous-directeur, ministère des Mines, Département des levés géologiques

Amoah, Kobina (Ghana) *Poste actuel dans le pays d'origine :* agent principal de planification économique, Division des investissements et de l'analyse des projets, ministère des Finances et de la Planification économique

Chatterjee, Rachel (Inde) *Poste actuel dans le pays d'origine :* co-commissaire au développement, Métiers à tisser manuels, ministère des Textiles

Dilla, Humberto Aroldo (Cuba) *Poste actuel dans le pays d'origine :* chercheur scientifique, Centro de Estudios Sobre América

Epio, Agnes Padilla (Philippines) *Poste actuel dans le pays d'origine :* directrice adjointe, Commission de la fonction publique, Bureau des normes professionnelles

Eteki, Marie-Louise (Cameroun) *Poste actuel dans le pays d'origine :* adjointe au chef de l'Agence Aménagement et Reconstruction du Nord-Ouest de Yaoundé, ministère de l'Urbanisme et de l'Habitat, Mission d'aménagement et d'équipement des terrains urbains et ruraux

Lertsuridej, Prommin (Thaïlande) *Poste actuel dans le pays d'origine :* directeur de l'hôpital communautaire Nongsoenghong, Bureau du secrétaire permanent de l'hygiène publique

Mahlati, Lisebo Alina (Lesotho) *Poste actuel dans le pays d'origine :* agente principale de planification, Section de la planification et des

statistiques en matière de santé, ministère de la Santé

Morelli, Jorge Eduardo (Pérou) *Poste actuel dans le pays d'origine :* secrétaire général, Instituto De socio-económico, Instituto De Estudios Alberto Ulloa

Mwiyerwa, Chrissie Nancy (Malawi) *Poste actuel dans le pays d'origine :* sous-directrice de programme, Division du développement agricole, ministère de l'Agriculture

Najera, Ruben Estuardo (Guatemala) *Poste actuel dans le pays d'origine :* conseiller, Département de la science et de la technologie, Secrétaire permanent du traité général d'intégration économique centraméricaine

Pangastuti, Sri (Indonésie) *Poste actuel dans le pays d'origine :* chef des services de santé, Section des fonctionnaires, Direction de la participation communautaire, ministère de la Santé

Rahman, Hamidur Md. (Bangladesh) *Poste actuel dans le pays d'origine :* chef adjoint, Division de planification, ministère du Plan

Rodriguez, Armando Agustín (Nicaragua) *Poste actuel dans le pays d'origine :* directeur général, Secretaría de Planificación y Presupuesto, Instituto Nacional de Estadísticas y Censos

Shrestha, Ramesh L. (Népal) *Poste actuel dans le pays d'origine :* agent de section, Division de la coordination de l'aide étrangère, ministère des Finances

Swarup, Asha (Inde) *Poste actuel dans le pays d'origine :* sous-secrétaire/directeur Développement rural, Commission de planification de l'Inde

Wu, Han (Chine) *Poste actuel dans le pays d'origine :* sous-chef de section, Section du développement scientifique et technologique, Commission scientifique et technologique de la province de Guangdong

Bourses accordées dans le cadre de programmes

Andrade, Beatriz O. (Colombie) Cours sur les conditions de travail et la santé; División de Ciencias Biológicas, Universidad Autónoma Metropolitana, México, DF, Mexique

Arroyave, Maria Elena (Colombie) Etudes supérieures menant à une maîtrise en épidémiologie; Université McGill, Montréal, QC, Canada

Basiao, Zubaida (Philippines) Doctorat en biologie, plus précisément en ichtyo-génétique; Département de biologie, Université Dalhousie, Halifax, NS, Canada

Betanecourt, Oscar (Équateur) Cours sur les conditions de travail et la santé; Universidad Autónoma Metropolitana, México, DF, Mexique

Bhuj, Dinesh Raj (Népal) Atelier régional sur la radiodiffusion communautaire et les nouvelles technologies; Institut Asie-Pacifique pour le développement de la radiodiffusion, Penang, Malaisie

Bustamante, Cristian (Chili) Cours sur les conditions de travail et la santé; Universidad Autónoma Metropolitana, México, DF, Mexique

Consejo Superior Universitario Centroamericano (Costa Rica) Permettre à sept boursiers d'entreprendre des études menant à une maîtrise en sociologie [Castro Valverde, Carlos (Costa Rica); Garay, Carolina Icabazela (Nicaragua); Gonzalez, Carlos Ramos (El Salvador); Gutierrez Andrade, Maria Jesus (Honduras); Povedano, Silvia Lara (Costa Rica); Roman Vega, Iabel (Costa Rica); Solis, Mario Alas (Honduras)]; Consejo Superior

la main-d'œuvre itinérante des mines quant à l'hébergement, et obtenir de l'information et une analyse qui contribueront à abolir les institutions répressives relatives à la main-d'œuvre itinérante et le système des enclos. 88 800 \$ — 12 mois.

89-1041 Documentation et application du savoir traditionnel sur l'environnement (Global-Canada) Dene Cultural Institute, Canada. Fournir un forum pour l'échange d'information entre chercheurs travaillant actuellement à documenter et à appliquer le savoir traditionnel des autochtones des Îles Pacifiques, du Sahel et du Nord canadien sur l'environnement dans le contexte de la gestion des ressources naturelles et de l'éducation locale institutionnalisée et non institutionnalisée. 74 200 \$ — 12 mois.

Projets préliminaires des divisions

Outre les activités énumérées dans les pages précédentes, le CRDI subventionne de nombreux projets, relativement modestes, visant à appuyer d'une façon ou d'une autre les activités en cours dans les divisions. Il peut s'agir, par exemple, de financer des ateliers ou des séminaires sur les priorités de la recherche dans une région ou sur un thème en particulier, de permettre à des chercheurs de pays en développement de participer à des réunions d'experts dans différents endroits dans le monde, ou encore de donner l'occasion à un spécialiste de visiter et de secondar une équipe affectée à un projet dans un autre pays. Par ailleurs, des fonds sont également à la disposition des bureaux régionaux du CRDI pour le financement d'initiatives régionales. La plupart des projets préliminaires des divisions permettent de couvrir le coût de réunions ou de consultations qui sont, directement ou indirectement, reliées aux travaux de recherche subventionnés par le Centre. En voici quelques exemples :

- Une étude a été financée dans le but de déterminer la faisabilité d'employer la radio, ou une combinaison de médias (radio et autres), pour diffuser les conclusions de recherches en agriculture aux petits agriculteurs du Kenya.
- Au Népal, un séminaire national sur le rôle des communications en ce

qui concerne les besoins fondamentaux a été subventionné en collaboration avec le ministère des Communications du gouvernement du Sa Majesté le roi du Népal et la Royal Nepal Academy of Science and Technology.

- Deux experts-conseils sri-lankais ont examiné les activités d'information à Sri Lanka pour évaluer les répercussions des activités passées et contribuer à définir l'orientation des programmes futurs.
- Un expert-conseil a mis en application une approche globale des exigences en matière d'information relatives à la planification et à la gestion des mesures d'urgence en cas de catastrophes nationales dans les pays en développement d'Asie. Plusieurs divisions ont mis leurs ressources en commun pour financer la visite de trois professeurs d'universités canadiennes à la Makerere University, en Ouganda, dans le but d'évaluer les besoins en matière de recherche, de formation et d'enseignement de la faculté des sciences sociales et du Makerere Institute of Social and Economic Research.
- Des fonds ont été octroyés pour la tenue d'une réunion à laquelle ont assisté 12 chercheurs d'Afrique australe, occidentale et orientale et qui a porté sur les questions reliées à l'accès des femmes africaines à la terre en vertu du droit coutumier et du droit écrit.
- En Zambie, où la crise économique entraîne un taux élevé d'inflation, la pénurie des produits de base essentiels et des difficultés d'ordre personnel, une bonne partie de l'équipe insuite quitte le pays. Un petit projet a été élaboré en vue de permettre à l'Education Research Bureau de l'Université de Zambie de faire une enquête auprès des instituts de recherche et de l'université pour documenter ce phénomène et examiner différentes mesures incitatives employées dans les pays voisins pour lutter contre « l'exode des cerveaux ».
- Le programme des bourses Pearson, qui a été créé en 1977, a fait l'objet d'une analyse qui a permis d'obtenir les données nécessaires à l'évaluation de ses répercussions et à la définition des changements

qualitatifs qu'il y aurait lieu d'y apporter.

- Un atelier de trois jours portant sur la recherche essentielle en matière de santé nationale pour les chercheurs et fournisseurs de services d'Égypte et du Moyen-Orient a réuni, en Égypte, des participants de ce pays et d'Iraq, de Jordanie, du Maroc, de la Syrie et du Yémen. Cet atelier avait pour objet de familiariser les participants avec la notion de la recherche essentielle en matière de santé.
- Une brève étude a eu pour but d'examiner et de confirmer les possibilités d'utilisation de la faible tension intraoculaire pour le diagnostic précoce de la lèpre par contact familial. Il pourrait s'agir d'une technologie simple, sûre et non envahissante, utilisable sur place et susceptible de constituer la première méthode satisfaisante pour le diagnostic précoce de cette maladie.
- L'institut de génie chimique de la Universidad de la República, en Uruguay, a entrepris une étude de l'industrie locale du tamage qui met l'accent sur les petites et moyennes entreprises. Outre la définition des problèmes relatifs aux procédés, l'étude examine la structure et les caractéristiques de cette industrie, de laquelle provenaient 12 % de l'ensemble des exportations industrielles en 1985.
- Un expert-conseil canadien a entrepris un examen de tous les projets subventionnés par la Division des sciences de la terre et du génie dans le secteur des fondrières, surtout en Amérique latine, pour évaluer les résultats de ces projets et recommander d'autres questions qui pourraient faire l'objet de recherches dans cet important secteur industriel de plusieurs pays en développement.
- Un expert-conseil a déterminé et évalué, dans les universités, les laboratoires de recherche fédéraux et les entreprises privées de biotechnologie, le savoir-faire canadien en biotechnologie pouvant être appliqué en agriculture, en foresterie et dans le domaine des pêches dans les pays en développement.
- Des experts-conseils ont entrepris une série d'études pour déterminer l'état actuel de la recherche en biotechnologie dans les régions visées par les activités du CRDI.

- Bapu Nagar. Evaluer les informations et les connaissances sur les programmes d'allègement de la pauvreté dans différents Etats indiens afin de formuler des politiques et des programmes meilleurs. 44 680 \$ — 24 mois.
- 89-0311 Taux d'intérêt et flux monétaire (Népal)***
Institute for Development Studies, Katmandou. Aider le gouvernement, la Banque centrale et les institutions financières nationales à mieux mobiliser les ressources financières et à les affecter plus efficacement. 36 600 \$ — 19 mois.
- 89-0313 Commercialisation et distribution des engrais chimiques (Thaïlande)**
Thai University Research Association, Bangkok. Permettre à la Faculty of Economics de la Chulalongkorn University, Thaïlande, de donner aux paysans thaïs la possibilité d'employer des engrais chimiques de qualité normalisée à des prix raisonnables et en quantité suffisante pour augmenter le rendement de leurs cultures. 50 320 \$ — 12 mois.
- 89-0321 Politique industrielle et réaction du monde des affaires (Argentine)***
Centro de Investigaciones Sociales sobre el Estado y la Administración, Buenos Aires. Analyser le développement de plusieurs entreprises industrielles de premier plan et formuler des suggestions au plan de la politique économique en prenant en compte les stratégies qu'ont adoptées les entreprises au fil de leur évolution historique. 71 440 \$ — 24 mois.
- 89-0322 Ajustement structurel et le secteur manufacturier (Guyana)***
Département de coopération économique internationale, Georgetown. Fournir une analyse détaillée de tous les aspects et de toutes les politiques liées au développement du secteur manufacturier guyanais de 1966 à 1988. 39 800 \$ — 12 mois.
- 89-0328 Les ordinateurs dans les écoles secondaires du Kenya : étude de cas d'une innovation pédagogique — Phase III**
Research and Evaluation Associates, Nairobi. Etudier les répercussions financières de l'information des écoles, en particulier le rôle des donateurs à l'étape initiale et ensuite la capacité des écoles et des collectivités d'appuyer l'innovation
- dans le contexte des ressources limitées. 93 700 \$ — 24 mois.
- 89-0331 Effet de la décentralisation sur la pauvreté rurale (Asie)***
Centre on Integrated Rural Development for Asia and the Pacific, Bangladesh. Examiner l'effet socio-économique des programmes de décentralisation sur des régions rurales au Bangladesh, en Inde, au Népal, à Sri Lanka et en Thaïlande, et analyser l'ampleur de la participation des pauvres des campagnes à la planification et à la mise en oeuvre de ces programmes. 56 030 \$ — 18 mois.
- 89-0338 Ajustement de la structure et crise agricole en Afrique***
Conseil pour le développement de la recherche économique et sociale en Afrique, Sénégal. Etudier les effets des politiques macroéconomiques, surtout les effets de l'ajustement structurel, sur l'agriculture. 230 000 \$ — 42 mois.
- 89-1005 Solutions de rechange au cyanaure dans l'industrie des poissons d'aquarium (Philippines-Canada)**
Harbor Foundation for the Conservation of Natural Resources, Manille, en collaboration avec l'Alliance internationale pour la vie sous-marine, Québec. Tester une méthode d'enseignement de techniques de pêche soutenables aux personnes qui s'adonnent à la pêche artisanale, et notamment à la capture de poissons d'aquarium sur les récifs de corail des Philippines; documenter et déterminer des options pour sa diffusion dans tout le pays; et appuyer les efforts actuels du gouvernement philippin pour lutter contre les techniques de pêche destructives. 172 930 \$ — 12 mois.
- 89-1013 Commerce extérieur (Chine-Canada)**
Ministry of Foreign Economic Relations and Trade, Beijing, et l'Institut de recherches politiques, Colombie-Britannique. Terminer les études sur : les questions de développement économique dans la région côtière; le rôle du commerce existant dans le développement de l'économie chinoise; la stratégie chinoise concernant les produits de base; la réforme du système du commerce extérieur de la Chine; la Chine et les négociations sur le commerce multilatéral; les perspectives de coopération économique de la Chine avec
- d'autres pays; et les aspects institutionnels du marché du change chinois. 147 465 \$ — 12 mois.
- 89-1015 Les industries entièrement exportatrices (Tunisie-Canada)**
Agence de promotion de l'industrie, Tunis, et l'Université de Sherbrooke, Québec. Améliorer la connaissance du gouvernement tunisien d'un secteur considéré comme prioritaire et l'aider à améliorer les politiques mises en place pour sa promotion. 36 370 \$ — 9 mois.
- 89-1020 Atelier sur les femmes et le développement (Global-Canada)**
Université Laval, Ste-Foy. Permettre au Laboratoire de recherches anthropologiques, d'enseigner un appareil conceptuel et une méthodologie de recherche sur les femmes et le développement en vue de mieux comprendre la réalité des femmes pour pouvoir ainsi mieux planifier des politiques de développement. 113 235 \$ — 12 mois.
- 89-1031 Gestion macro-économique (Tanzanie-Canada) — Phase II***
Université de Dar es-Salaam et l'Université de Toronto, Ontario. Améliorer et mettre à jour le modèle macroéconomique assujéti à l'offre pour que le modèle puisse servir à des simulations de politiques macroéconomiques qui aideront les décideurs, particulièrement ceux de la Commission de planification, de la Banque centrale, et dans les ministères des finances, du commerce et des industries, et de l'agriculture. 180 795 \$ — 24 mois.
- 89-1033 Négociations dette / commerce (Global-Canada) — Phase III**
Facultad Latinoamericana de Ciencias Sociales, Argentine, et l'Institut Nord-Sud, Ottawa. Examiner deux aspects de la négociation commerciale mondiale, soit les déterminants politiques et économiques de la négociation commerciale de certains pays développés avec les pays en développement; et comparer les stratégies de négociation commerciale employées par les pays en développement. 210 670 \$ — 24 mois.
- 89-1034 Main-d'oeuvre itinérante (Afrique du Sud-Canada)***
University of Cape Town et l'Université Queen's, Kingston. Faire une analyse critique des politiques de l'Etat et des compagnies minières sur

- 89-0297 Minimiser les risques d'inondation : plaine Kano (Kenya)***
Kenya University, Nairobi. Étudier la nature et l'importance des risques d'inondation dans la plaine Kano et aussi les mesures non structurales à prendre pour minimiser les pertes (méthodes de mise à l'épreuve contre les inondations, les systèmes d'avertisseurs, etc.). 51 840 \$ — 15 mois.
- 89-0301 Programme de bourses de recherche BOLFESWA (Botswana-Lesotho-Swaziland) — Phase II***
Botswana Educational Research Association, Maseru, Lesotho Educational Research Association, Luyengo. Continuer à améliorer les compétences en recherche sur l'éducation dans leurs pays respectifs. 149 550 \$ — 24 mois.
- 89-0302 Évaluation de l'efficacité du réseau scolaire (République arabe du Yémen)**
Educational Research and Development Center, Sana'a. Déterminer les lacunes entre les services éducatifs offerts et la demande pour ces services, évaluer la qualité des services d'éducation à tous les niveaux et proposer un programme d'éducation qui pourra répondre à la demande sociale croissante d'écoles et aux exigences du développement économique durable. 145 200 \$ — 24 mois.
- 89-0303 Refonte des comptes des revenus nationaux dans le secteur des pêches (Costa Rica)***
Tropical Science Center, San José. Établir une méthode pour traiter les ressources naturelles, dans ce cas-ci les poissons, au même titre que les autres biens corporels de manière à enregistrer l'épuisement des ressources comme consommation de capital et non comme revenu. 33 370 \$ — 12 mois.
- 89-0306 Inventaire des travaux de recherche en sciences sociales sur l'environnement (Brésil)**
Universidade de São Paulo. Dresser l'inventaire des recherches en sciences sociales sur l'environnement et gouvernementales. 55 000 \$ — 12 mois.
- 89-0310 Programmes d'allègement de la pauvreté et macropolitiques (Inde)***
Institute of Development Studies, Londres. Étudier les relations entre les réformes économiques et la structure et l'industrie de la performance de la performance afin de déterminer les interventions indiquées au plan des politiques pour augmenter la production nationale. 72 990 \$ — 24 mois.
- 89-0224 Dumping interdit ici : contrôle des pesticides dans les pays en développement (Global)**
Environmental Liaison Centre International, Kenya. Appuyer et coordonner un groupe d'organisations non gouvernementales dans quatre pays, afin d'étudier les marchés nationaux des pesticides dans les pays en développement. 107 026 \$ — 18 mois.
- 89-0232 Culture indigène et utilisation des services de santé chez les migrants indiens (Guatemala)***
Universidad del Valle de Guatemala. Déterminer l'utilisation que font les familles indiennes de certains services de santé pour les enfants de 0 à 5 ans, l'importance de certains facteurs socio-culturels par rapport à une pleine utilisation des services croyançes, les habitudes et le personnel traditionnel peuvent être employés par le système de santé en y étant intégrés. 53 100 \$ — 12 mois.
- 89-0245 Égalité et démocratie en éducation (Chili) — Phase III**
Centro de Investigación y Desarrollo de la Educación, Santiago. Poursuivre le programme intégré de recherche, vulgarisation et diffusion en éducation et ce faisant, répondre plus efficacement aux nouveaux défis que lui impose la situation socio-politique, économique et culturelle actuelle dans le pays. 140 000 \$ — 24 mois.
- 89-0254 Répercussions socioéconomiques de la surexploitation des mangroves (Philippines)**
University of Eastern Philippines Research and Development Foundation Inc., Samar. Formuler des recommandations pour assurer une utilisation et gestion efficaces à long terme des mangroves. 39 400 \$ — 24 mois.
- 89-0264 Réforme de la politique économique et gestion de l'environnement (Afrique australe et orientale)***
African Centre for Technology Studies, Kenya. Étudier les relations entre les réformes économiques et la gestion de l'environnement qui guidera les politiques axées sur le développement durable dans la région et qui contribuera à établir les compétences voulues en recherche sur les politiques en Afrique subsaharienne. 192 980 \$ — 18 mois.
- 89-0269 Évaluation des programmes d'enseignement à distance (République dominicaine)**
Centros APEC de Educación a Distancia, Santo Domingo. Faire une évaluation systématique de l'impact éducationnel, social et économique des programmes d'enseignement à distance sur les diplômés des centres APEC. 57 840 \$ — 12 mois.
- 89-0273 L'enseignement des sciences en Côte d'Ivoire : approches, problèmes et perspectives**
Université d'Abidjan. Permettre au Centre ivoirien de recherches économiques et sociales, d'étudier les contraintes liées à l'institutionnalisation des enseignements scientifiques et à l'interaction entre la science/technologie et la société. 38 000 \$ — 24 mois.
- 89-0278 Emploi hors ferme dans les montagnes (Népal)**
International Centre for Integrated Mountain Development, Katmandou. Élaborer et mettre en oeuvre un cadre de travail analytique complet pour évaluer les questions et options essentielles relatives à l'emploi hors-ferme dans la région de l'Hindou Kouch et de l'Himalaya en Chine, au Népal et au Pakistan. 246 500 \$ — 20 mois.
- 89-0288 Administration locale (Afrique du Sud-Zimbabwe)***
University of the Western Cape, Bellville, et l'University of Zimbabwe, Harare. Effectuer une étude sur la réorganisation des systèmes gouvernementaux locaux dans l'Afrique post-apartheid ainsi que sur les réformes du gouvernement local au Zimbabwe. 592 740 \$ — 24 mois.
- 89-0294 Solutions de rechange pour l'éducation non structurée des enfants d'âge préscolaire (Colombie)**
Centro de Investigación y Desarrollo Infantil, Bogotá. Planifier, implémenter et évaluer un programme communautaire alternatif d'éducation préscolaire en produisant un matériel didactique qui stimulera le développement intégré de l'enfant par des jeux destinés aux enfants des régions rurales où il n'y a pas de services préscolaires. 94 320 \$ — 18 mois.
- 89-0310 Programmes d'allègement de la pauvreté et macropolitiques (Inde)***
Institute of Development Studies, Londres. Étudier les relations entre les réformes économiques et la structure et l'industrie de la performance de la performance afin de déterminer les interventions indiquées au plan des politiques pour augmenter la production nationale. 72 990 \$ — 24 mois.

89-0142 Compétitivité externe dans l'industrie marocaine
Centre d'études et de recherche Aziz Belal, Rabat. Contribuer à l'optimisation de l'intervention de l'Etat en faveur du développement industriel en dressant un bilan de l'expérience de politique industrielle depuis l'adoption du programme d'ajustement structurel. 156 220 \$ — 24 mois.

89-0152 Habitat économique et promotion sociale à Abidjan (Côte d'Ivoire)
Université d'Abidjan. Permettre au Centre de recherches architecturales et urbaines d'étudier l'impact de l'intervention de l'Etat ivoirien dans le domaine du logement urbain par un sondage de 1 000 ménages, moitié propriétaires, moitié locataires. 58 360 \$ — 18 mois.

89-0154 Impôts fonciers : source de revenus pour les gouvernements locaux (Nigeria)
Obafemi Awolowo University, Ile Ife. Permettre au Department of Public Administration d'examiner et d'analyser quelques-unes des meilleures stratégies pour traiter des problèmes liés à l'impôt foncier, tablant sur l'expérience nigérienne et sur celle d'autres pays africains. 99 800 \$ — 24 mois.

89-0160 Repenser la ville latino-américaine — Phase II
Instituto Internacional de Medio Ambiente y Desarrollo—América Latina, Argentine. Rechercher de nouvelles façons d'analyser comment les villes latino-américaines sont bâties, administrées et entretenues, et déterminer les ressources locales disponibles à cette fin; perfectionner une série de propositions de politiques qui permettraient aux organismes internationaux de s'attaquer plus efficacement aux problèmes de l'urbanisation dans la région. 128 160 \$ — 24 mois.

89-0176 Centre d'information et de recherche sur les changements climatiques (Asie du Sud)*
Tata Energy Research Institute, Inde. Etablir un centre qui rassemblera, établira et diffusera de l'information sur les répercussions des changements climatiques sur les sociétés, information qui s'attachera surtout aux éléments en rapport avec les sexes. 160 350 \$ — 36 mois.

89-0177 Conditions de vie dans les auberges de travailleurs immigrés au Cap (Afrique du Sud)
University of Cape Town. Permettre

au Department of Social Anthropology d'analyser les conditions de vie dans les auberges construites par les autorités municipales du Cap et de fournir aux résidents de ces auberges les données nécessaires pour faire campagne et obtenir de meilleures conditions de vie. 10 620 \$ — 12 mois.

89-0178 La migration internationale de retour en Egypte
American University in Cairo. Permettre au Social Research Center de mesurer et d'analyser l'impact économique et social de ce phénomène sur les familles égyptiennes migrantes et non migrantes. Les résultats du projet pourront servir à la formulation de politiques globales visant à faciliter l'intégration sociale et économique des migrants de retour dans la société égyptienne. 50 560 \$ — 24 mois.

89-0183 Macro-étude à l'intention du gouvernement philippin sur la politique à adopter pour le développement des petites entreprises
Appropriate Technology International/Philippines, Manille. Permettre au Congressional Economic Planning Staff d'élaborer une politique nationale intégrée sur le développement des petites entreprises, pour adoption par le congrès philippin. 47 310 \$ — 12 mois.

89-0186 Développement de la région inca : potentiel et obstacles (Pérou)
Centro de Estudios Rurales Andinos « Bartolomé de las Casas », Cuzco. Evaluer les possibilités de développement socio-économique, mais aussi les obstacles à ce développement, dans la région inca, en vue d'un plan de développement et de formuler des lignes directrices régional appropriée et durable. 86 780 \$ — 18 mois.

89-0192 Gestion des recettes d'exportation (Amérique latine)
Centro de Estudios de la Minería y el Desarrollo, Bolivie; Centro de Estudios del Cobre y la Minería, Chili; Corporación de Investigaciones Económicas para Latinoamérica, Chili; et Grupo de Análisis para el Desarrollo sur l'économie des d'exportation sur l'économie des pays en développement pour concevoir des politiques qui minimiseront les coûts des fluctuations des prix internationaux

des produits de base. 353 390 \$ — 24 mois.

89-0194 Enquête nationale sur l'alphabétisation des ménages (République démocratique du Yémen)*
General Directorate for Literacy and Adult Education, Aden. Mettre au point un instrument d'enquête pour mesurer l'alphabétisation dans le contexte de la république, en s'attachant plus particulièrement au moyen d'insérer les résultats de l'enquête dans la planification de l'éducation nationale et à l'amélioration des compétences nationales pour l'exécution et l'utilisation d'enquêtes semblables. 80 190 \$ — 12 mois.

89-0197 Renforcement de la capacité de recherche de la population (Indonésie)
Hasanuddin Universitas, Ujung Pandang. Permettre au Population Research and Studies Centre de mettre au point un module de formation en méthodes de recherche à faible coût qui sera intégré à ses futurs programmes de formation de chercheurs et de planificateurs en démographie dans cinq provinces de l'est de l'Indonésie. 70 050 \$ — 36 mois.

89-0198 Etablissements humains et développement durable (Global)
Université de Toronto, Canada. Permettre au Centre for Urban and Community Studies de promouvoir des discussions à l'échelle internationale qui permettront de mieux comprendre les relations entre les établissements humains et le développement durable en finançant la préparation de six rapports régionaux, rédigés par des chercheurs reconnus de pays en développement. 53 120 \$ — 12 mois.

89-0199 Gestion du secteur parallèle urbain (Thaïlande)
National Economic and Social Development Board, Bangkok. Permettre au Thailand Development Research Institute de trouver des politiques pratiques pour résoudre les problèmes liés aux besoins essentiels des travailleurs du secteur parallèle urbain, particulièrement les problèmes en rapport avec leur emploi. 88 190 \$ — 12 mois.

89-0201 Industrie de transformation des huiles et graisses végétales (Kenya)
Egerton University, Njoro. Permettre au Department of Economics d'analyser et d'évaluer l'offre et la demande d'huiles et de graisses

89-0079 Réseau de recherche sur l'éducation en Afrique orientale et australe (Kenya)
 Kenyatta University, Nairobi.
 Permettre au Educational Research Network in Kenya de renforcer la collaboration entre les chercheurs et les instituts de recherche kenyans et de réanimer son affiliation avec le Réseau de recherche sur l'éducation en Afrique orientale et australe.
 26 460 \$ — 24 mois.

89-0096 Accès des pauvres des villes aux services : élaboration de politiques axées sur l'action (Global)
 Banque mondiale, États-Unis.
 Trouver de meilleures façons de donner aux pauvres des villes accès aux services urbains essentiels tout en notant les problèmes rencontrés et les questions de politique à traiter pour assurer cet accès.
 58 200 \$ — 6 mois.

89-0102 Réseau d'études sur la politique technologique (Afrique orientale et australe) — Phase III
 CRDI, Kenya. Renforcer le réseau East African Technology Policy Studies comme mécanisme pour faciliter l'échange d'idées, d'expérience et de résultats entre les chercheurs et pour encourager la collaboration entre les chercheurs et les décideurs.
 215 480 \$ — 36 mois.

89-0103 Réseau d'études sur la politique technologique (Afrique de l'Ouest) — Phase II
 CRDI, Kenya. Générer de l'information utilisable dans la conception et la mise en œuvre de la future politique ou dans la détermination de l'évaluation de l'impact de la politique actuelle et de renforcer le réseau West African Technology Policy Studies comme mécanisme pour favoriser la collaboration entre les chercheurs et les décideurs de la région.
 215 480 \$ — 36 mois.

89-0104 Évaluation comparée du développement régional dans les pays asiatiques (Asie du Sud-Est)
 University of Indonesia, Jakarta; UP Planning and Development Research Foundation, Philippines; et la Thai University Research Association, Bangkok. Évaluer l'expérience de développement régional dans leurs pays respectifs des 15 dernières années par des études de cas qui contribueront à l'éventuelle reformulation de la politique et des projets régionaux dans les années 90.
 155 985 \$ — 24 mois.

89-0107 Réseau sur le développement humain et les études familiales (Inde)
 M.S. University of Baroda, Vadodara. Permettre au Département de développement de l'enfant d'établir un centre de coordination de la recherche et des services consultatifs en développement humain et études familiales.
 84 000 \$ — 24 mois.

89-0117 Politique économique et répartition du revenu (Chili)
 Corporación de Investigaciones Económicas para Latinoamérica, Santiago. Acquérir de nouvelles connaissances au sujet du comportement des économies latino-américaines et s'en servir pour exercer une influence sur les politiques économiques au Chili.
 419 700 \$ — 24 mois.

89-0120 Réseau de recherche en éducation de l'Afrique occidentale et centrale
 Université nationale du Bénin, Togo. Mettre en place un réseau de recherche sur l'éducation en Afrique centrale et occidentale afin d'accroître l'efficacité de l'éducation sur le plan interne dans la région et de lui permettre de mieux faire face à des conditions socio-économiques de plus en plus contraignantes.
 328 470 \$ — 24 mois.

89-0121 Mortalité maternelle (Afrique de l'Ouest)*
 Direction de la statistique, Burkina Faso; l'Association congolaise pour le bien-être familial, Congo; le Ministère de la santé publique et des affaires sociales, Mali; et le Centre africain d'études supérieures en gestion, Sénégal. Aider à mettre sur pied un réseau en Afrique qui a pour but de fournir les éléments d'appréciation permettant de maîtriser les problèmes de morbidité et de mortalité maternelles.
 360 670 \$ — 24 mois.

89-0126 Sous-marchés non réglementés du logement urbain en Ahmedabad (Inde)
 Ahmedabad Study Action Group. Documenter les mécanismes inhérents au fonctionnement du sous-marché non réglementé du logement urbain dans la ville d'A Ahmedabad et disséminer les résultats de la recherche au moyen de cinq ateliers.
 37 030 \$ — 18 mois.

89-0127 Le secteur parallèle (Sri Lanka)
 Margya Institute, Colombo. Étudier le secteur parallèle dans l'économie urbaine pour déterminer les possibilités d'augmenter la

productivité, de créer des revenus et des emplois et d'absorber peu de technologie à relativement peu de frais.
 60 470 \$ — 28 mois.

89-0129 Transport urbain à Lagos (Nigeria)*
 Obafemi Awolowo University, Ile Ife. Permettre au Département of Economics d'apporter une contribution à la politique de transport urbain du Nigeria, en analysant systématiquement l'organisation, l'exploitation et l'efficacité des modes informels de transport public, à partir d'une étude de cas de la situation de Lagos.
 32 450 \$ — 24 mois.

89-0130 Les Tonitres : associations de crédit traditionnelles (Cameroun)*
 Centre Universitaire de Douala. Permettre à l'Ecole supérieure des sciences économiques et commerciales d'étudier le mécanisme d'intermédiation financière que représentent les tonitres et examiner la possibilité de les faire plus fiables par moyens légaux et réglementaires.
 29 330 \$ — 24 mois.

89-0135 Données sur la mortalité infantile comme moyen de suivi des politiques dans le nord-est du Brésil
 Fundacao Sistema Estadual de Analise de Dados, São Paulo. Faire une recherche sur l'application et l'adaptation d'une nouvelle méthode démographique (données sur les enfants) afin de surveiller les niveaux de mortalité infantile et les résultats de certains programmes de santé au Brésil.
 176 255 \$ — 24 mois.

89-0137 Organisations rurales et participation (Sierra Leone)
 University of Sierra Leone, Free Town. Permettre au Département of Agricultural Economics, Njala University College, d'analyser les facteurs, conditions et problèmes touchant les organisations rurales locales, et en particulier la mesure dans laquelle ils font participer, ou pourraient faire participer, les pauvres en milieu rural au développement.
 55 590 \$ — 24 mois.

89-0138 Petites bourses de recherche (Afrique de l'Est) — Phase VI
 Organization for Social Science Research in Eastern Africa, Ethiopie. Continuer à octroyer de petites bourses de formation et de recherche en sciences sociales, à l'appui des mêmes objectifs que dans les phases précédentes, et consolider leurs résultats.
 220 000 \$ — 24 mois.

applications en utilisant MINISIS dans le STIC. 93 790 \$ — 24 mois.

89-0309 Information agricole (Sénégal) — Phase III*

Ministère du développement rural, Dakar. Permettre au Centre de documentation de mettre en place un système décentralisé d'accès à l'information dans les neuf régions intérieures du pays par la création de cellules documentaires régionales et par la diversification des produits d'information. 225 841 \$ — 36 mois.

89-0317 Système national d'information pour la science et la technologie (Tanzanie)*

Tanzania Commission for Science and Technology, Dar es-Salaam. Améliorer ses compétences de conseil relativement à l'implantation socio-économiques au sujet de l'éducation et du travail, dans le contexte des changements qui caractérisent le pays. 39 830 \$ — 18 mois.

89-0042 Plan de développement régional pour Xinjiang (Chine)

Xinjiang Research Institute of Scientific and Technological Policy, South Urumqi. Fournir une évaluation complète et récente des possibilités de développement de Xinjiang, de même que des lignes directrices en matière de planification stratégique. 130 000 \$ — 24 mois.

89-0054 Enseignement à distance des méthodes de recherche (Amérique latine)

Ministerio de Educación Pública, Costa Rica. Permettre au Département de Investigación Educativa de formation en recherche sociale à l'intention des fonctionnaires de l'Amérique centrale et des Antilles travaillant en recherche en éducation. L'objectif est d'avoir un effet sur la formation des politiques d'éducation. 47 100 \$ — 21 mois.

89-0055 Consortium sur la recherche économique (Pérou)

Centro de Estudios y Promoción del Desarrollo; Centro de Investigaciones de la Universidad del Pacífico; Grupo de Análisis para el Desarrollo; Instituto de Estudios Peruanos; et Pontificia Universidad Católica del Perú, Lima. Financer un programme quadriennal de recherche, publication et diffusion sur les questions clés à considérer dans la politique économique du Pérou. 344 325 \$ — 48 mois.

89-0056 Commerce intérieur (Chine)

Shanghai Academy of Social

89-0028 Villes intermédiaires et développement régional (Mexique) Universidad Nacional Autónoma de México, Mexico. Permettre à l'Instituto de Geografía d'évaluer les efforts du gouvernement pour encourager la croissance des villes intermédiaires. 102 160 \$ — 24 mois.

61 010 \$ — 24 mois.

sources internes et étrangères. technologie introduite au Nigéria, de sur la nature et le volume de la programme d'ajustement structurel

Madan. Étudier les effets du Management and Administration, National Centre for Economic

technologie (Nigéria) 89-0027 Ajustement structurel et

246 695 \$ — 36 mois.

création des ressources humaines. global, qui est d'exploiter le potentiel technologies à l'appui de l'objectif

locale les grandes possibilités de ces services de planification à l'échelle géographique, et de démontrer aux le modèle des systèmes d'information

systèmes locaux d'information, selon des techniques de télédétection et des une méthode fondée sur l'intégration Waterloo, Ontario. Mettre au point

Université de Lagos et l'Université de locale (Nigéria-Canada) — Phase II

89-1018 Cartographie à l'échelle nationale. 115 950 \$ — 24 mois.

scientifique et technologique et à la planification de la politique conseil relativement à l'implantation

Améliorer ses compétences de and Technology, Dar es-Salaam. Tanzania Commission for Science

technologie (Tanzanie)* d'information pour la science et la

89-0317 Système national d'information pour la science et la

technologie (Tanzanie)*

Tanzania Commission for Science and Technology, Dar es-Salaam. Améliorer ses compétences de conseil relativement à l'implantation

socio-économiques au sujet de l'éducation et du travail, dans le contexte des changements qui caractérisent le pays. 39 830 \$ — 18 mois.

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Xinjiang Research Institute of Scientific and Technological Policy, South Urumqi. Fournir une

évaluation complète et récente des possibilités de développement de Xinjiang, de même que des lignes directrices en matière de planification

stratégique. 130 000 \$ — 24 mois.

89-0054 Enseignement à distance des méthodes de recherche (Amérique latine)

Ministerio de Educación Pública, Costa Rica. Permettre au Département de Investigación Educativa de formation en recherche sociale à l'intention des fonctionnaires de l'Amérique centrale et des Antilles

travaillant en recherche en éducation. L'objectif est d'avoir un effet sur la formation des politiques d'éducation. 47 100 \$ — 21 mois.

89-0055 Consortium sur la recherche économique (Pérou)

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quadriennal de recherche, publication et diffusion sur les questions clés à considérer dans la politique économique du Pérou. 344 325 \$ — 48 mois.

89-0056 Commerce intérieur (Chine)

Shanghai Academy of Social Sciences. Permettre à l'Institut de National Economy Research de documenter le schéma et les mécanismes de la libéralisation du commerce intérieur, de prévoir le

schéma futur et les problèmes, d'évaluer les avantages et d'examiner une politique de rééchange et les approches institutionnelles. 40 700 \$ — 24 mois.

89-0059 Le problème du logement et la participation communautaire (Costa Rica)

Centro de Estudios para la Acción Social, San José. Faire une analyse comparée du rôle actuel et potentiel des organisations communautaires dans la formulation et l'application de politiques du logement. 28 068 \$ — 24 mois.

89-0060 Programme d'enseignement du rééchange pour les diplômés du secondaire (République dominicaine) — Phase II

Colégio Dominicano de Estudios Profesionales, Santo Domingo. Concevoir, éprouver et évaluer un système expérimental d'enseignement technique sans mur et supervisé pour les diplômés et les décrocheurs du

secondaire. 123 000 \$ — 34 mois.

89-0073 Agriculture sous contrat (Ouganda)

Université Makerere, Kampala. Permettre à l'Institut de recherches sociales de Makerere d'évaluer l'agriculture sous contrat en bien-être des petits exploitants et la politique de développement agricole. 45 300 \$ — 18 mois.

89-0076 Éducation des travailleurs (Ouganda)

Centre for Basic Research, Kampala. Concevoir, réaliser et appliquer un ensemble de modules pédagogiques à l'intention des travailleurs faisant partie d'organisations ouvrières. 120 790 \$ — 18 mois.

89-0077 Conservation et mise en valeur de l'écosystème du mont Everest (Chine-Népal)

Woodlands Mountain Institute, États-Unis. Permettre à la Working Commission on Himalayan Nature Preserve, Beijing, et au Task Force for the Makalu-Barun Extension of Sagarmatha National Park, Kamanadon, d'étendre en territoire népalais le parc autour du mont Everest pour protéger une beaucoup plus grande surface utilisée saisonnièrement et peu peuplée et créer un parc national sur le côté tibétain de la frontière. 228 980 \$ — 20 mois.

industrielles dans les régions rurales de Java-Ouest. 98 730 \$ — 36 mois.

89-0155 Centre de documentation et d'information pour les petites et moyennes industries (Requateur) Instituto de Investigaciones Socioeconómicas y Tecnológicas (INSOTEC), Quito. Renforcer son centre de documentation et d'information et entreprendre la décentralisation de ses services d'information par la création de deux bureaux provinciaux d'information industrielle pour les petites et moyennes entreprises. 219 600 \$ — 36 mois.

89-0163 Réseau national d'information sur la santé (Colombie) — Phase II Federación Panamericana de Asociaciones de Facultades de Medicina (FEPAFEM), Bogotá. Elargir et consolider le réseau national d'information sur la santé en tant que système regroupant des services autonomes interagissant à l'appui d'un objectif commun, à savoir l'utilisation rationnelle et efficace de l'information sur la santé et les sciences biomédicales, tout en préparant le transfert des activités de la FEPAFEM à un organisme national, qui sera probablement la fondation sans but lucratif INFORMED. 153 580 \$ — 24 mois.

89-0174 Système d'information sur la gestion de la recherche agricole (Philippines) Philippine Council for Agriculture, Forestry and Natural Resources Research and Development, Los Baños. Accélérer la production et l'utilisation de techniques pour le développement des campagnes en renforçant la recherche agromatique et la gestion du développement au niveau national et régional. 430 700 \$ — 48 mois.

89-0193 Etablissement de réseaux informatisés en Afrique (PADIS) Commission économique pour l'Afrique des Nations Unies, Ethiopie. Permettre au Système d'information panafricain sur le développement (PADIS) d'améliorer le flux d'information au service du développement socio-économique; d'améliorer l'utilisation des systèmes et réseaux d'information existants par la création de liens de communication entre eux; de favoriser l'utilisation des technologies de communication de données; et d'améliorer les liens entre les chercheurs en Afrique, et aussi ailleurs, qui s'occupent de développement. 217 825 \$ — 24 mois.

89-0196 Réseau latino-américain d'information sur la main-d'œuvre (RELIS) : module d'inspection des entreprises* Centro Interamericano de Administración del Trabajo, Pérou. Créer le module d'inspection de la main-d'œuvre au sein de RELIS, à titre de service d'information pour les administrateurs du travail afin de faciliter l'administration du travail et la mise en application de lois régissant le travail. 264 545 \$ — 24 mois.

89-0213 Audiothèque rurale (Mali) Ministère des sports, des arts et de la culture, Bamako. Permettre à la Direction nationale des arts et de la culture de faire participer les populations rurales à leur propre développement économique et social en favorisant la diffusion du savoir moderne et traditionnel par le biais d'audiothèques villageoises dont le réseau national actuel sera consolidé et étendu par la création de 50 nouvelles audiothèques dans des régions géographiques, linguistiques et culturelles différentes. 99 305 \$ — 24 mois.

89-0217 Système d'enregistrement et de gestion de la dette — Phase II Commonwealith Fund for Technical Cooperation, Royaume-Uni. Optimiser les efforts de la External Management Unit, Ministry of Finance and Planning, Colombo, afin de contrôler et de gérer la dette existante dans un cadre macroéconomique global en consolidant et en accroissant les compétences de son personnel en se servant du Commonwealith Secretariat-DRMS, version 5. 52 050 \$ — 6 mois.

89-0225 Réseau d'information sur le développement pour l'Asie du Sud (DEVINSA) — Phase II Institut Margat, Sri Lanka. Renforcer le système d'information sur l'Asie du Sud du Committee for Studies in Cooperation for Development afin d'appuyer ses programmes de recherche et ainsi permettre à chaque établissement principal d'avoir accès au système d'information ayant trait à son domaine d'intérêt et d'en extraire l'information nécessaire à ses études. 245 040 \$ — 36 mois.

89-0230 Système d'enregistrement et de gestion de la dette (DRMS) (Mozambique)* Commonwealith Fund for Technical Cooperation, Royaume-Uni. Permettre au Public Debt

Department, Ministère des finances, Maputo, d'appliquer le système informatique Commonwealith Secretariat-DRMS et de fournir la formation voulue pour son utilisation de sorte que le Ministère des finances et la Banque du Mozambique pourront s'en servir pour obtenir des subventions extérieures et en assurer le service et pour faire des prêts au sein du pays. 101 100 \$ — 24 mois.

89-0240 Centre d'information et de documentation du CREDESA (Bénin)* Université nationale du Bénin, Cotonou. Permettre à la Faculté des sciences de la santé et au Centre régional de développement et santé, Pahu, de mettre en place au sein du projet de développement sanitaire de Pahu un centre d'information et de documentation spécialisé en soins de santé primaires. 140 452 \$ — 36 mois.

89-0262 Centre d'information sur les mauvaises herbes de l'Asie du Sud-Est (SEAWIC) — Phase II* Regional Center for Tropical Biology, Indonésie. Répondre aux besoins des vulgarisateurs, du personnel sur le terrain et des fermiers, en modifiant le programme d'information et en établissant de nouveaux services; de continuer à offrir des services d'information aux équipes de recherche sur les mauvaises herbes, ainsi que de commercialiser l'expertise, les services et les produits de l'équipe de recherche de SEAWIC. 315 652 \$ — 36 mois.

89-0272 Activité d'information sur le développement après-barrages (Mali-Mauritanie-Sénégal)* Organisation pour la mise en valeur du Fleuve Sénégal, Dakar. Permettre au Centre régional de documentation et de consolidation actuel et de s'ouvrir davantage aux divers groupes communautaires qui sont impliqués dans cette nouvelle phase de développement. 111 555 \$ — 24 mois.

89-0277 Centre de ressources MINISIS (Chine) — Phase II* Centre d'information scientifique et technique (STIC), Beijing. Offrir des services directs aux usagers chinois de MINISIS; encourager l'utilisation de la base de données comme outil de traitement appliqué de l'information; aider à l'élaboration (en cours) d'une version chinoise de MINISIS et de développer plus avant les

d'utilisateurs et des moyens d'accès dont ils disposent. 224 600 \$ — 30 mois.

89-0023 Système d'enregistrement et de gestion de la dette (Thaïlande)

Ministry of Finance, Bangkok. Appuyer l'application du système informatisé d'enregistrement et de gestion de la dette du Commonwealth Secretariat et offrir de la formation à son utilisation. 118 300 \$ — 24 mois.

89-0024 Réseau de bibliothèques sur le commerce et l'économie à Lahore — Projet pilote (Pakistan)

Lahore University of Management Sciences. Permettre à la Graduate School of Business Administration de créer, dans la région de Lahore, un réseau de bibliothèques et des bases de données bibliographiques spécialisées en administration publique et privée, gestion et économie pour servir comme modèle de réseau de partage d'information à suivre par les autres bibliothèques et centres d'information du pays. 75 700 \$ — 24 mois.

89-0025 Réseau africain d'information sur la normalisation (Afrique) — Phase II

African Regional Organization for Standardization (ARSO), Kenya. Rendre ses systèmes de documentation et d'information (DISNET) complètement opérationnels en développant des centres nationaux participant au réseau et en renforçant l'échange d'information entre eux. 244 685 \$ — 24 mois.

89-0033 Réseau national de documentation et d'information en santé (Zimbabwe)

Université du Zimbabwe, Harare. Permettre à la bibliothèque de médecine d'améliorer l'accès à l'information émanant des services de santé du pays ou les concernant, en établissant un réseau national de documentation et d'information en matière de santé. 141 115 \$ — 24 mois.

89-0035 Maîtrise en bibliothéconomie (Antilles)

University of the West Indies, Jamaïque. Assister le Department of Library Studies afin de mettre sur pied un programme de maîtrise en bibliothéconomie d'une durée de 15 mois. 125 500 \$ — 24 mois.

89-0044 Système d'information sur l'administration provinciale (SIAP) (Thaïlande)

National Economic and Social

Development Board, Bangkok. Améliorer qualitativement le SIAP de

provinciaux de tous les niveaux auront un outil de planification, de contrôle et d'évaluation à long terme qui liera la production, l'emploi et le développement des provinces au marketing. 265 800 \$ — 24 mois.

89-0045 Réseau communautaire d'information et de documentation commerciales CRIC/CEAO (Afrique de l'Ouest)

Communauté économique de l'Afrique de l'Ouest (CEAO), Burkina Faso. Créer, entre les noeuds décentralisés et le noeud principal, des relations harmonieuses de coopération dans le cadre de la collecte, du traitement et de la diffusion de l'information commerciale, tout en permettant au Centre régional d'information commerciale (CRIC) d'accéder aux systèmes d'information existant en dehors de la sous-région. 309 000 \$ — 24 mois.

89-0069 Service de documentation, de bibliothèque et de l'information — SDBIS (Sri Lanka)

Université de Colombo. Permettre à la Faculté de médecine de contribuer à la réalisation de « la santé pour tous d'ici l'an 2000 » en fournissant rapidement des informations sur la santé et les sciences biomédicales à l'appui du processus décisionnel à l'intention des professionnels des soins de santé. 77 870 \$ — 36 mois.

89-0070 Système d'information géographique pour les petites municipalités (Costa Rica)

Universidad Nacional, Heredia. Permettre à l'Escuela de Ciencias Geográficas de mettre sur pied le prototype d'un outil basé sur un système d'information géographique sur micro-ordinateur pour dresser, mettre à jour et garder à jour les plans directeurs de petites municipalités et de l'essayer dans deux municipalités représentatives. 91 040 \$ — 24 mois.

89-0078 Service d'information sur les innovations (Uruguay)

Centro de Innovación y Desarrollo, Montevideo. Financer et stimuler l'activité des agents d'innovation, particulièrement les petites et moyennes entreprises, en établissant un service d'information sur l'innovation qui cherchera à faciliter une collaboration avec les réseaux d'information commerciale et financière et les agences de développement. 243 630 \$ — 36 mois.

89-0080 Réseau d'information sur l'eau et l'assainissement (Tanzanie)

Ministry of Water, Dar es-Salaam. Permettre au Rwegaralla Water Resources Institute d'établir un réseau national d'information sur l'eau et l'assainissement, en renforçant le centre de documentation de l'institut, en collaboration avec le centre de documentation du Water Master Plan Coordination Unit et la bibliothèque du ministère. 129 480 \$ — 27 mois.

89-0086 Centre d'information et de documentation sur l'hygiène et la sécurité au travail (Malawi)

Ministry of Labour Headquarters, Lilongwe. Permettre au Factories Inspectorate de recueillir, de mettre en forme et de diffuser de l'information pertinente en matière d'hygiène et de sécurité au travail, et pour ce faire, de mettre sur pied un centre de documentation et d'information. 148 370 \$ — 24 mois.

89-0097 Service de l'information pour l'industrie (Colombie)

Asociación Colombiana Popular de Industrias, Bogotá. Renforcer son service d'information technologique pour l'industrie et décentraliser ses services dans trois régions du pays. 156 680 \$ — 24 mois.

89-0098 Centres d'information villageois (Inde)*

Manpal Industrial Trust, Karnataka. Créer 50 centres d'information villageois répartis également entre les Taluks Udipi et Thirathi, Etat de Karnataka, et par l'essai et l'affinement de méthodologies de livraison des informations aux collectivités rurales, construire un modèle utilisable ailleurs en Inde. 127 240 \$ — 36 mois.

89-0105 Réseau régional d'information sur la banane et le plantain en Amérique latine et dans les Antilles

Union de Países Exportadores de Banano, Panama. Mettre sur pied et organiser un réseau d'information sur la banane et le plantain en établissant des services nationaux chargés de recueillir et de diffuser de l'information de façon régulière et continue, et en reliant les activités régionales à celles du centre mondial de coordination de Montpellier, en France. 218 000 \$ — 24 mois.

89-0112 Service d'information pour les petites industries (Indonésie)

Perkumpulan Untuk Peningkatan Usaha Kecil, Bandung. Renforcer sa capacité d'offrir des services d'information aux petites entreprises

du sel pratiquée en Basse Guinée par des paysans pour qui la production de sel constitue une activité économique de contre-saison essentielle.

24 033 \$ — 18 mois.

89-1006 Stratégie d'exploitation de la ratière (Global-Canada)

James F. Hickling Management Consultants Ltée, Ottawa. Choisir, parmi les dix pays déjà désignés comme marchés possibles de la technologie de la ratière, les deux ou trois pays qui offrent le meilleur potentiel de vente à court terme; et d'élaborer des stratégies détaillées de marketing pour chacun de ces pays, y compris les méthodes à utiliser et les modalités des ententes. 176 550 \$ — 8 mois.

89-1009 Talus du Rif (Maroc-Canada)

Centre national d'études routières, Rabat, et l'Université Laval, Québec. Permettre à l'École Hassania des travaux publics et à la faculté de génie civil de faire une étude globale du phénomène des instabilités en général, et des glissements de terrain en particulier, de la région du Rif. 356 853 \$ — 42 mois.

89-1011 Habitats à l'épreuve des cyclones (Antilles-Canada)*

University of the West Indies, Trinité, et l'Université de Waterloo, Ontario. Par la participation communautaire, améliorer les modèles d'habitation et les techniques et méthodes de construction de sorte à donner aux habitants à l'épreuve des cyclones. 392 370 \$ — 30 mois.

89-1017 Hydrogéologie quaternaire (Béni-Canada) — Phase II*

Université nationale du Bénin, Cotonou; l'Université de Dakar, Sénégal; et l'Université Laval, Québec. Acquisition d'une meilleure connaissance des conditions hydrodynamiques et hydrochimiques des systèmes aquifères du bassin sédimentaire côtier sud-béninois en vue de leur exploitation optimale. 375 105 \$ — 36 mois.

89-1019 Meilleures techniques de transformation de la jute de qualité inférieure et des cuttings de jute (Bangladesh-Canada)

International Jute Organization, Dhaka, et l'Université Laval, Québec. Meilleure au point de meilleures techniques de traitement qui amélioreront la fibre de la jute de qualité inférieure et des cuttings de jute afin d'en optimiser l'utilisation commerciale. 232 367 \$ — 30 mois.

89-1022 Programme interface industrielle/utilisation des résultats de la recherche (Global-Canada)

Division des sciences de la terre et du génie, CRDI, Ottawa. Offrir une formation pratique en cours d'emploi à des gestionnaires de la recherche à des pays en développement et accroître l'efficacité des organisations de recherche industrielle auxquelles le programme Technologie au service des entreprises locales s'intéresse. 199 000 \$ — 18 mois.

89-1025 Modèle de gestion de l'eau dans le Manille métropolitain (Philippines-Canada)

National Hydraulic Research Centre, Quezon City, et l'Université McGill, Québec. Construire un modèle de gestion de l'eau pour le Manille métropolitain et ses environs qui se fondera sur l'emploi conjugué de l'eau de surface et de l'eau souterraine de la région. 227 700 \$ — 36 mois.

89-1027 Tuiles en fibres végétales (Côte d'Ivoire-Canada)*

École nationale supérieure des travaux publics, Yamoussoukro, et le Conseil national de recherches, Ottawa. Rendre possible la production de tuiles en fibres végétales économiques, de façon à permettre au pays de réduire ses importations d'éléments de toiture pour la production de logements. 245 400 \$ — 36 mois.

89-1028 Mines de charbon (Inde-Canada)*

Mining, Geological and Metallurgical Institute of India, Calcutta, et l'Université Laval, Québec. Établir une procédure géophysique pour délimiter les mines de charbon abandonnées qui ne sont pas cartographiées. 325 500 \$ — 36 mois.

89-1029 Développement des nappes souterraines (Mexique-Canada) — Phase II

Universidad Nacional Autónoma de México (UNAM), Mexico. Prévoir la réponse du système des nappes souterraines de la vallée de Mexico soumis aux stress continus de l'extraction d'eau, en s'attachant plus particulièrement à l'évaluation du risque de contamination des nappes souterraines et renforcer le groupe de recherche à l'Institut de géophysique de l'UNAM. 261 000 \$ — 36 mois.

89-1032 Appui au secteur minier (Zimbabwe-Canada)*

Université du Zimbabwe, Harare, et l'Université de Toronto, Ontario. Réduire les risques attribuables à l'affaiblissement des sols dans les

petites mines et ce faisant, améliorer les conditions de travail des mineurs. 239 400 \$ — 36 mois.

89-1035 Efficacité de galvanoplastie (Philippines-Canada)*

Industrial Technology Development Institute, Manille, et le Conseil de recherche de la Saskatchewan, Saskatoon. Mettre au point une technologie pour éliminer la contamination au chrome attribuable à l'industrie galvanoplastique. 237 000 \$ — 24 mois.

89-1039 Transformation du baume de cajou (Mozambique-Canada)*

Universidade Eduardo Mondlane, Maputo, et l'Université de Western Ontario, London. Mettre au point un procédé pour transformer le baume de cajou brut extrait en usiné, en produits chimiques pour le marché du Mozambique. 240 600 \$ — 30 mois.

89-1043 Sabie de fonderie (Amérique latine-Canada)*

Université Mayor de San Andrés, Bolivie; l'Universidad Nacional de Colombia; l'Escuela Superior Politécnica de Litoral, Equateur; et le CECOP (Collège d'enseignement général et professionnel) de Trois-Rivières, Québec. Perfectionner la technologie du moulage au sable dans les petites et moyennes fonderies pour améliorer leur productivité et la qualité du moulage. 239 000 \$ — 36 mois.

Sciences de l'information 9

89-0002 Information sur les réfugiés (Soudan)

Commissariat pour les réfugiés, Khartoum. Prendre les mesures en vue d'améliorer le traitement sur les réfugiés dans le pays. 120 000 \$ — 24 mois.

89-0011 SITIA : Système d'information sur la télématique et l'informatic en Afrique (Afrique centrale et occidentale)

Institut Africain d'informatic, Gabon. Diffuser, dans le cadre d'un réseau dans les pays membres de l'Institut d'informatic sur les technologies de l'informatic et de la télématique, et ce en fonction des besoins de différentes catégories

9. Les projets subventionnés conjointement avec une autre division paraissent sous le titre « Projets multivisionnaires ».

89-0336 Évaluation de la croissance staturo-pondérale des enfants de la naissance à 5 ans

Université nationale du Bénin, Cotonou. Permettre au Département de pédiatrie et génétique d'établir les normes de la croissance staturo-pondérale et du périmètre abdominal des enfants de la naissance à 5 ans et de déterminer l'incidence et la prévalence de la malnutrition dans les différents groupes d'âge dans la cohorte. 39 280 \$ — 60 mois.

89-0337 Étude des aspects socio-culturels de l'épilepsie

(Sénégal)*
Environnement et Développement du Tiers-Monde, Dakar. Apprendre l'interprétation socio-culturelle de l'épilepsie, à travers les différents acteurs concernés : le malade lui-même, la famille, la communauté et le praticien de médecine traditionnelle. 40 440 \$ — 12 mois.

89-0339 Étude des facteurs de risques d'infection VIH (Bénin)*

Université Laval, Canada. Permettre à son Département de médecine sociale et préventive d'améliorer la prévention du SIDA en République du Bénin en contribuant à une meilleure connaissance des facteurs et co-facteurs de risque de l'infection. 9 675 \$ — 3 mois.

89-0340 Mesure du développement des enfants chez les Yorubas (Nigéria)*

Lagos University Teaching Hospital. Permettre à l'Institute of Child Health and Primary Care d'administrer le test de développement Denver à un échantillon d'enfants pour voir comment il pourrait être valide et/ou adapté aux conditions culturelles et environnementales du Nigéria. 6 163 \$ — 9 mois.

89-0346 Hygiène en milieu rural (Afrique du Sud)*

Consultancy for Alternative Education, Canada. Permettre au Roodpopoort, de poursuivre la conception d'un manuel d'hygiène en milieu rural destiné aux travailleurs sur le terrain et aux travailleurs de la santé en Afrique du Sud et dans d'autres pays du Tiers-Monde. 55 675 \$ — 12 mois.

89-1014 Recherche sur la santé communautaire (Éthiopie—Canada) — Phase II

Université McGill, Québec. Permettre au Ministère de la santé, Addis Ababa, de créer des compétences analytiques et en

recherche en santé au niveau des

districts et des collectivités; de fournir des informations sur la santé dans les collectivités et des analyses de cette dernière au Ministère aux fins de prise de décision; et d'établir un dialogue soutenu sur la santé et les services de santé entre les services de santé de district, les facultés des sciences de la santé de l'université et le ministère. 850 000 \$ — 36 mois.

89-1030 Séminaire sur la recherche appliquée en matière de

santé (Bénin—Canada)*
Université nationale du Bénin, Cotonou, et l'Université Laval, Québec. Aider les chercheurs enseignants de la Faculté des sciences de la santé à concevoir, décrire et exécuter les différentes étapes d'un projet de recherche opérationnelle appliquée à la médecine. 51 460 \$ — 12 mois.

89-1037 Participation communautaire aux SSP

(Botswana—Canada)
Université du Botswana, Gaborone, et l'Université de Toronto, Ontario. Rassembler des informations en profondeur sur la participation communautaire, les soins de santé primaire (SSP) et le rôle des infirmières dans la participation communautaire. 108 560 \$ — 12 mois.

89-1038 Impact sur la santé et sur

l'état nutritionnel des familles des travailleurs des plantations (République dominicaine—Canada)
Centro de Promoción Integral y Salud Educacional, Santo Domingo, et l'Université Laval, Québec. Déterminer la situation socio-sanitaire dans les bateys de la République dominicaine à travers des indicateurs materno-infantiles en relation avec les interventions du projet du Bon Samaritain, en vue de faire les recommandations pour une plus grande efficacité de ces interventions. 220 820 \$ — 36 mois.

Sciences de la terre et du génie⁸

89-0053 Sables bitumineux

(Nigéria)
University of Benin, Benin City. Permettre à son département de génie civil de mettre au point une

8. Les projets subventionnés conjointement avec une autre division

parassent sous le titre « Projets multivisionnaires ».

89-0074 Eaux estuariennes

(Sénégal)*
Université Cheikh Anta Diop, Dakar. Permettre au Département de géologie d'obtenir une meilleure connaissance de l'hydrochimie de l'estuaire du fleuve Sénégal et de localiser les zones dont l'environnement est le plus perturbé entre le lac de Guiers et l'embouchure, de façon à proposer des solutions pour la gestion de l'eau dans cette partie du fleuve. 23 989 \$ — 18 mois.

89-0075 Huiles végétales non

alimentaires (Burkina Faso)
Centre national de la recherche scientifique et technologique, Ouagadougou. Permettre à l'Institut burkinabé de l'énergie de proposer des techniques efficaces de valorisation décentralisées des huiles végétales non alimentaires pour satisfaire des besoins de production de produits d'entretien. 32 155 \$ — 18 mois.

89-0280 Contrôle des tours

manuels à l'aide de micro-processeurs (Thaïlande)
Université Chiang Mai. Mettre au point un système pour équiper les tours manuels existants d'un contrôle numérique, afin d'améliorer la capacité de production des petites entreprises et leur permettre de soutenir une industrie en expansion. 110 400 \$ — 24 mois.

89-0287 Habitations à louer

modèle (Philippines)
Capiz Research, Extension and Development Consortium, Roxas City. Faire, en collaboration avec la University of the Philippines et la National University of Singapore, des recherches visant la construction avec des matériaux locaux, dans la province de Capiz, d'habitations à l'épreuve des typhons qui seront peu coûteuses à bâtir, d'un prix modique à l'achat et socialement acceptables. Le projet comportera la participation des collectivités à la planification, la conception, la construction et le financement des habitations. 129 930 \$ — 24 mois.

89-0293 Sel de mangrove

(Guinée)*
Direction nationale de la recherche scientifique, Conakry. Améliorer la technique traditionnelle d'extraction

nutrition humaine du département de la technologie alimentaire et de la nutrition, University of Nairobi, de trouver des moyens de prévenir les retards de croissance attribuables à la perte d'éléments nutritifs et au diabète. 40 156 \$ — 27 mois.

89-0235 **Pulvérisateur insecticide** à dos (Malaisie)*
Malaysian Agricultural Research and Development Institute, Kuala Lumpur. Mettre au point un pulvérisateur insecticide à dos plus sûr, plus efficace et plus abordable qui pourrait être fabriqué localement dans les pays en développement. 94 700 \$ — 24 mois.

89-0242 **Statut et fécondité des femmes chez les Gusi (Kenya)**
Université de Nairobi. Permettre à l'Institut des études africaines d'étudier les questions culturelles et sociales relatives au statut de la femme et à l'adoption d'une réglementation de la fécondité. 2 904 \$ — 8 mois.

89-0243 **Sécurité alimentaire et état nutritionnel des ménages (Congo)***
Organisation de recherche scientifique et technique d'outre-mer, Brazzaville. Identifier les groupes vulnérables en matière de nutrition afin d'assurer la sécurité alimentaire à ces groupes cibles et aux autres groupes. 104 000 \$ — 24 mois.

89-0244 **Hygiène et sécurité du travail dans l'industrie du coton (Ouganda)***
Ministère du travail, Kampala. Permettre au bureau d'inspection des usines de déterminer et d'évaluer les risques qui menacent la sécurité et la santé des travailleurs du coton en Ouganda et de mettre au point des mesures de prévention et de contrôle. 195 700 \$ — 24 mois.

89-0246 **Modèle de médecine familiale dans les pays moins industrialisés (Global)**
Collège des médecins de famille du Canada, Willowdale. Permettre à l'organisation mondiale des associations et collèges de médecins de famille (WONCA) d'étudier l'applicabilité du modèle de médecine familiale dans les pays en développement et de déterminer les points communs et les différences dans les besoins et les ressources de la médecine familiale dans différentes parties du monde. 74 500 \$ — 30 mois.

89-0247 **Haute altitude et travail dans les mines (Pérou)**
Universidades Peruanas Cayetano Heredia, Lima. Évaluer l'état de santé de la population andine, plus particulièrement les mineurs, en se penchant surtout sur les maladies qui sont ou seraient liées à des troubles physiologiques attribuables à la haute altitude. 146 445 \$ — 18 mois.

89-0251 **Dimensions biomédicales et socioculturelles de l'anémie à hématies falciformes (Nigéria)***
Obafemi Awolowo University Teaching Hospital, Ile Ife. Exposer l'histoire naturelle de l'anémie à hématies falciformes ainsi que son traitement génétique dans une région du Nigéria, de recueillir des données sur les dimensions cognitives et les pratiques culturelles des parents dont les enfants souffrent de cette maladie; de préparer un programme d'éducation sanitaire et des lignes directrices à suivre par les patients et leurs familles. 122 920 \$ — 60 mois.

89-0270 **Évaluation écologique, sociale et sanitaire (Mexique)***
Universidad Autónoma de Yucatán, Mérida. Permettre au Centro de Investigaciones Regionales « Hiedro Noguchi », en collaboration avec le Centro de Investigaciones y de Estudios Avanzados del Instituto Politécnico Nacional, d'améliorer le bien-être de la collectivité maya grâce à des informations obtenues à l'aide de la participation active de la population concernée. 50 000 \$ — 8 mois.

89-0290 **Écologie de la leishmaniose (Jordanie)***
Université de Jordanie. Étudier la prévalence et les facteurs de risque communautaires (écologie) de la leishmaniose cutanée afin de proposer des mesures de prévention et des remèdes appropriés. 146 600 \$ — 36 mois.

89-0296 **Consortium d'universités canadiennes pour la santé et le développement (Global)**
Université McMaster, Canada. Faciliter la formation et la constitution du Consortium proposé d'universités canadiennes pour la santé et le développement des activités au cours des 2 prochaines années. 156 900 \$ — 24 mois.

89-0319 **Centre d'évaluation et de planification (Afrique du Sud)***
University of Natal, Durban. Permettre à son département de pédiatrie de créer des compétences en recherche appliquée, en gestion et en

planification des programmes de la santé et du développement dans une société d'après-apartheid fondée sur l'égalité des races, la démocratie et la justice. 108 359 \$ — 12 mois.

89-0324 **Analyse sociale du SIDA (Ouganda)***
Makerere University, Kampala. Permettre à sa faculté des sciences sociales de fournir des données de base descriptives sur le SIDA aux fins d'interventions sous forme de politiques et de programmes. 61 250 \$ — 12 mois.

89-0326 **Évaluation des systèmes d'hygiène professionnelle (République de Corée)**
Catholic Industrial Medical Center, Séoul. Permettre au Département of Preventive Medicine, Catholic University Medical College, d'établir une méthodologie qui pourra servir à évaluer deux méthodes permettant d'offrir des services d'hygiène professionnelle. L'étude portera sur les services préventifs et curatifs. 135 920 \$ — 24 mois.

89-0330 **Collecte des eaux pluviales (Tanzanie)***
Centre for Housing Studies, Dar es-Salaam. Permettre à la Water Research Division, Ministry of Water, d'étudier les connaissances, pratiques et attitudes courantes concernant les techniques et systèmes de collecte de l'eau de pluie afin de les améliorer et de les vulgariser. 45 450 \$ — 18 mois.

89-0334 **Hérarchisation des facteurs de risque de pneumonie chez l'enfant (Brésil)***
Universidade Federal de Pelotas. Étudier l'impact relatif des variables environnementales, socio-économiques et comportementales qui accroissent le risque de pneumonie chez les jeunes enfants vivant dans les quartiers pauvres des villes de Fortaleza (nord du Brésil). 120 000 \$ — 24 mois.

89-0335 **Essai sur le terrain d'une échelle colorimétrique non sanguine de l'hémoglobine (Nigéria)***
University of Lagos. Permettre à l'Institute of Child Health and Primary Care d'évaluer la sensibilité et la spécificité d'une méthode de dépistage de l'anémie qui consiste à comparer la couleur de la langue d'une personne à une échelle colorimétrique pour éventuellement en élargir l'usage dans les tests sanguins. 12 716 \$ — 9 mois.

89-0159 Déterminants de l'emploi et de l'efficacité des contraceptifs (Chine)
Collège de Nanjin des administrateurs de la planification familiale. Établir les divers déterminants et leur impact sur l'efficacité de la contraception, en s'attachant plus particulièrement au taux d'échec dans la ville de Yangzhou, comme base à la formulation d'une intervention efficace qui réduira l'échec de la contraception et le recours à l'avortement. 77 190 \$ — 12 mois.

89-0161 Désinfection de l'eau d'usage domestique (Thaïlande)
Technology, Bangkok. Mettre au point un procédé peu coûteux pour désinfecter l'eau des puits de surface dans les villages ruraux. 46 820 \$ — 24 mois.

89-0169 Filtration lente au sable (Égypte)
Université d'El-Mansoura. Permettre au département de génie civil de mettre au point une technologie de traitement de l'eau dans les régions rurales, qui soit simple, rentable et d'un fonctionnement et d'un entretien simples. 112 920 \$ — 30 mois.

89-0170 L'allaitement au sein et les mères ouvrières (Indonésie)*
Universitas Indonesia, Jakarta. Permettre à sa faculté de médecine d'examiner les problèmes associés à l'allaitement au sein chez les ouvrières dans le but de formuler des solutions qui favoriseront ce type d'allaitement. 58 354 \$ — 21 mois.

89-0171 Systèmes sanitaires portuaires (Lesotho)
Ministère de l'intérieur, Maseru. Permettre à l'équipe d'amélioration des systèmes sanitaires urbains d'évaluer un petit camion-citerne pour la vidange des fosses; examiner les spécifications nécessaires à l'opération et l'entretien d'un service de vidange des fosses abordable; et de diffuser les résultats de ces travaux à d'autres départements et organisations travaillant à favoriser un système sanitaire sans eau. 9 820 \$ — 12 mois.

89-0173 Stratégie éducative visant à réduire l'échec de la contraception dans la Chine urbaine
Lu Wan District Maternity and Child Health Hospital, Chine. Permettre au Department of Obstetrics and Gynaecology d'améliorer les options en matière de contraception et d'encourager l'utilisation efficace de contraceptifs adaptés, en mettant sur

89-0180 Filtrés dégrossisseurs (Colombie)
Universidad del Valle, Cali. Optimiser le nettoyage hydraulique des filtres dégrossisseurs et formuler des directives pour le fonctionnement et l'entretien de ces filtres utilisés comme unités de prétraitement de l'eau dans les systèmes ruraux et périurbains d'approvisionnement en eau. 67 580 \$ — 24 mois.

89-0182 Utilité et coûts des soins de santé pour les ménages ruraux kényans
African Medical and Research Foundation, Nairobi. Déterminer l'utilisation et les coûts des services de soins de santé pour les ménages, et déterminer l'effet que pourrait produire l'introduction des frais d'utilisation sur l'accès aux soins de santé, surtout chez les femmes et les enfants. 60 900 \$ — 24 mois.

89-0184 Partenariat universitaire pour la recherche essentielle dans le domaine de la santé (Global)
Université McMaster, Canada. Faire en sorte que l'enseignement des professionnels de la santé aide mieux les diplômés à déterminer et résoudre les problèmes des collectivités dans lesquelles ils travaillent. 125 000 \$ — 18 mois.

89-0195 Facteurs socioculturels influant sur le comportement contraceptif (Indonésie)
Yayasan Pelayaan Dan Pengembang Masyarakat Desa, Malang. Trouver des expériences qualitatives à la dynamique (changements séquentiels) de la prise de décision concernant l'emploi de contraceptifs et à certains des facteurs influant. 50 040 \$ — 12 mois.

89-0205 Recherche sur les services de santé dans le district de Tatta (Pakistan) — Phase II*
Université Aga Khan, Karachi. Permettre au Département des sciences de la santé communautaire, Faculté des Sciences de la santé, de renforcer les services de santé dans la province de Sindh en mettant au point et en éprouvant des mécanismes novateurs de planification, d'administration et d'exploitation de services de santé, l'accent étant mis sur les services de santé maternelle et infantile. 436 950 \$ — 36 mois.

89-0209 Captage des eaux de pluie (Bangladesh)*
Bangladesh Agricultural University, Mymensingh. Créer un bon système de captage des eaux de pluie et d'en faire la démonstration, système destiné aux régions rurales où les puits ne sont pas facilement praticables en raison de leurs coûts de construction et de la mauvaise qualité de l'eau (saliñité et teneur en fer). 136 510 \$ — 24 mois.

89-0211 Systèmes de filtration de l'eau à base de gravier (Jordanie)
Royal Scientific Society, Amman. Étudier la viabilité de filtres à base de gravier (peu coûteux) pour améliorer la qualité des effluents des étangs de stabilisation des déchets afin d'en réduire les concentrations de coliformes et d'algues à des niveaux autorisables pour l'irrigation non restreinte dans les collectivités rurales à faibles revenus. 102 000 \$ — 30 mois.

89-0216 Prévention communautaire du paludisme (Tanzanie)*
National Institute for Medical Research, Muhheza. Permettre au Armani Medical Research Centre de déterminer et de comparer, dans des essais en collectivité, l'efficacité de moustiquaires imprégnées de perméthrine par opposition aux rideaux de lit quant à la réduction des indices paludéens cliniques, parasitologiques et entomologiques. 152 960 \$ — 36 mois.

89-0226 Aide à l'éducation — SIDA (République dominicaine)
Instituto de Sexualidad Humana, Santo Domingo. Comparer l'efficacité de la thérapie individuelle par rapport à la thérapie de groupe, qui inclut le conseil, le soutien psychologique et l'éducation, en termes de changement de comportement sexuel à risque élevé de la part des personnes séropositives. 114 556 \$ — 24 mois.

89-0227 Lutte contre la carence en iode (Inde)*
Shreemati Nahibai Damodar Thackersey Women's University, Bombay. Permettre au Home Science College de fournir les données de base sur le taux d'iode de la population « à risque » dans les régions où il n'est pas établi que le goitre soit endémique, à l'intention du département de santé publique du gouvernement de Maharashtra. 37 683 \$ — 24 mois.

89-0233 Alimentation des enfants et maladie diarrhéique (Kenya)*
Kenya Medical Research Institute, Nairobi. Permettre à l'unité de

89-0081 Lutte communautaire contre le paludisme (Thaïlande)
Mahidol University, Bangkok.
Permettre à la Faculté de médecine tropicale d'évaluer le programme de lutte collective contre le paludisme dans les villages de cinq régions où la maladie sévit. 90 180 \$ — 24 mois.

89-0084 Révision et essai du matériel de l'atelier de recherche sur les systèmes de santé (Global)
Universidad de San Carlos de Guatemala; Makerere University, Uganda; et l'Université of Freeown, Sierra Leone. Encourager, faciliter et coordonner les mécanismes qui accéléreront la mise en oeuvre de la recherche sur les systèmes de santé dans les pays en développement. 231 860 \$ — 18 mois.

89-0088 Analyse des problèmes de santé et de nutrition (Sénégal)
Centre d'enseignement supérieur en soins infirmiers, Dakar. Explorer les facteurs qui influent sur la santé et le statut nutritionnel des enfants d'âge préscolaire de façon à développer des recommandations pour l'amélioration de la santé infantile dans les régions rurales. 14 150 \$ — 12 mois.

89-0089 Immunisation antihépatocœluse (Soudan)
University of Khartoum. Permettre au Département de pédiatrie de comparer la production d'anticorps, l'efficacité et les coûts-avantages d'autres vaccins contre la rougeole (Edmonston-Zagreb à doses élevées) ou Comanught à doses élevées) administrés à des enfants de cinq mois, au Soudan, à ceux du vaccin antihépatocœluse et de son schéma d'administration conventionnel (Schwarz dose standard administré à neuf mois). 224 870 \$ — 24 mois.

89-0090 Leishmaniose (Mexique) — Phase II
Universidad Autónoma de Yucatán, Mérida. Permettre au Centro de Investigaciones Regionales de determinar les facteurs de risque associés à l'acquisition de l'infection ou de la maladie « leishmaniose cutanée » dans l'Etat de Campeche, afin d'établir des mesures de prévention et de lutte. 110 750 \$ — 30 mois.

89-0100 Stratégie d'immunisation contre l'hépatite B (Corée-Malaisie-Philippines)
Universiti Sains Malaysia, Minden, en collaboration avec le Philippines General Hospital, Manille, et la Kyungpook National University, Taegu. Etablir dans quelle mesure

l'immunisation contre le virus de l'hépatite B est efficace lorsqu'elle est intégrée à différents programmes élargis de vaccination nationaux et ce, dans le but d'élaborer un système simplifié de vaccination pour ces pays. 452 630 \$ — 36 mois.

89-0118 Le SIDA chez les nourrissons (Ouganda) — Phase II
Makerere University, Kampala. Permettre au Département of Paediatrics and Child Health de continuer à analyser l'épidémiologie de la transmission périnatale de l'infection par le VIH et de continuer à suivre des paires mère-enfant pendant une nouvelle période de 2 ans, et d'obtenir ainsi des données visant une période ininterrompue de 4 ans. 105 080 \$ — 24 mois.

89-0123 Troubles associés à la carence en iode (Kenya)*
Ministry of Health, Nairobi. Permettre au National Council for Control of Iodine Deficiency Disorders de faire une enquête nationale pour déterminer la gravité de l'étendue de la carence en iode et d'obtenir des données sur la consommation de sel iodé. 199 982 \$ — 25 mois.

89-0124 Chloroquinine-résistance dans le traitement du paludisme (Guinée)
Ministère de la Santé et de la Population, Conakry. Permettre au Service national de contrôle du paludisme, Service de prévention, d'étudier la prévalence du paludisme, la distribution du *Plasmodium falciparum* résistant à la chloroquine et à la quinine en Basse Guinée, la disponibilité et l'utilisation des drogues antipaludiques par la population. 107 470 \$ — 24 mois.

89-0125 Remise sur pied des facultés de sciences de la santé (Ouganda)
Makerere University, Kampala. Permettre la remise sur pied des facultés de sciences de la santé grâce à une aide institutionnelle à long terme et d'axer les programmes d'études de la Faculté de médecine sur la santé et le bien-être des collectivités rurales et des pauvres en milieu urbain. 1 055 500 \$ — 48 mois.

89-0136 Toxicologie des molluscicides végétaux (Indonésie)
Université Carleton, Canada. Permettre au Département de biologie de déterminer l'innocuité écologique et toxicologique du molluscicide végétal *Phytolacca*

dodecandra (Endod) avant d'en promouvoir l'utilisation dans et par les collectivités pour lutter contre l'escargot aquatique qui est l'hôte intermédiaire de la schistosomiasse de l'être humain. 126 645 \$ — 12 mois.

89-0146 Repas de sang chez les vecteurs (Pérou)
Universidad Peruana Cayetano Heredia, Lima. Permettre à l'Instituto de Medicina Tropical Alexander von Humbolt de déterminer les sources de repas de sang et la présence de la leishmaniose dans certaines espèces de *lutzomyia* dans les environnements domiciliaires et péri-domiciliaires de la vallée Huayllacallan. 53 831 \$ — 18 mois.

89-0148 Programme communautaire de TR0
(Nicaragua)*
Universidad Nacional Autónoma de Nicaragua, León. Permettre à la Facultad de Ciencias Médicas de déterminer l'efficacité d'un programme communautaire de réhydratation orale (TR0) sur les connaissances et attitudes des mères et la réduction des mortalités infantiles attribuables à la diarrhée. 76 466 \$ — 24 mois.

89-0149 Lutte contre l'onchocercose (Côte d'Ivoire)
Institut Pierre Richet, Bouaké. Déterminer l'impact du traitement de la transmission par l'ivermectine dans une zone de petites rivières de forêt en Côte d'Ivoire. 145 080 \$ — 24 mois.

89-0150 Infections aiguës des voies respiratoires (Népal)*
Tribhuvan University, Népal. Permettre à l'Institute of Medicine de réduire la morbidité et la mortalité attribuables aux infections aiguës des voies respiratoires chez les enfants de 0 à 5 ans, en mettant au point un plan de traitement fondé sur l'identification des agents principaux de transmission, la sensibilité de ces bactéries aux antimicrobiens, et les facteurs de risque dans la population des enfants. 103 630 \$ — 24 mois.

89-0156 Détection de la résistance aux insecticides (Cuba)
Instituto de Medicina Tropical « Pedro Koun », La Havane. Mettre à l'essai sur le terrain un test simplifié de détection rapide de la résistance aux organophosphates, et déterminer si une éprouve sur papier-filtre est aussi bonne que le test bio-essai utilisé à présent par l'Organisation mondiale de la santé. 25 500 \$ — 18 mois.

- les paysans leur ont réservé. 170 300 \$ — 34 mois.
- 89-0308 La culture des bananes (Philippines) — Phase III***
Philippine Council for Agriculture and Resources Research and Development, Los Batos. Permettre à la University of the Philippines de sommer les obstacles biologiques et socio-économiques qui confrontent les petits cultivateurs de bananes et d'échanger des informations, des résultats de recherche et du plasma germinal avec la collectivité internationale des chercheurs s'intéressant à la banane. 242 220 \$ — 36 mois.
- 89-0314 Minéralisation/recyclage des nutriments (Costa Rica)***
Asociación Bananera Nacional, San José. Permettre de mieux comprendre le processus de minéralisation des déchets des récoltes dans les bananeraies. Les chercheurs identifieront les microorganismes à l'origine de cette activité. 146 570 \$ — 36 mois.
- 89-0315 Inga (Pérou) — Phase II**
Instituto Nacional de Investigación Agraria y Agroindustrial, Lima. Étudier le potentiel des essences d'arbre *Inga* comme composantes des technologies agroforestières à appliquer à toute une gamme de conditions pédologiques et climatiques des tropiques humides. 100 000 \$ — 12 mois.
- 89-0318 Lutte intégrée contre les ennemis des récoltes (Égypte)***
University of Alexandria. Permettre à sa faculté d'agriculture, en collaboration avec la University of Assiut et le Ministère de l'agriculture, de mettre au point et d'évaluer un système de lutte intégrée contre les ennemis du maïs qui réduira l'emploi de pesticides et leurs effets néfastes sur l'environnement et la santé et accroîtra les revenus des cultivateurs de maïs en Égypte. 210 410 \$ — 48 mois.
- 89-0323 Lutte biologique contre les ennemis des cultures (Inde) — Phase III***
University of Nagpur, Maharashtra. Mettre au point la production commerciale *in vitro* de *Nosema locustae*, un agent biologique pour contrôler les sauterelles, et des stratégies appropriées pour sa gestion. 78 040 \$ — 36 mois.
- 89-0333 Essai en ferme (Équateur) — Phase II***
Fundación para el Desarrollo Agropecuario, Quito. Augmenter la production et la productivité des
- systèmes de production du maïs, du haricot et du blé à petite échelle par l'application de résultats de recherches provenant des institutions de la région. 118 800 \$ — 24 mois.
- 89-0342 Réseau national d'aquiculture (Colombie)***
Fondo Colombiano de Investigaciones Científicas y Proyectos Especiales Francisco José de Caldas, Bogotá. Contribuer au développement de l'aquiculture en eau douce et en eau salée en renforçant les efforts du réseau national d'aquiculture afin de coordonner les activités des 40 organismes impliqués en aquiculture. 50 000 \$ — 12 mois.
- 89-0343 Conchyliculture (Indonésie) — Phase II***
Institut de recherche central sur les pêches, Jakarta. Permettre à l'Institut de recherche sur l'aquiculture côtière d'accroître la production des crustacés et leur attrait commercial et de hausser les revenus des pêcheurs et les possibilités d'emploi des habitants des côtes. 54 030 \$ — 24 mois.
- 89-0345 Lutte biologique (Chine) — Phase II***
Chinese Academy of Agricultural Sciences, Beijing. Perfectionner et réduire le coût de la production commerciale de plusieurs espèces de trichogramma, un parasite qui attaque les oeufs des insectes nuisibles, et élargir l'application de la technique. 55 500 \$ — 36 mois.
- 89-1016 Symbioses racinaires de l'Acacia (Tunisie-Canada) — Phase II**
Institut national de recherches forestières, Tunis, et l'Université Laval, Québec. Augmenter la productivité d'*Acacia cyanophylla*, par l'action du rhizobium, des champignons endomycorhiziens et par des voies de sélection clonale. 222 550 \$ — 36 mois.
- 89-1021 Réseau sur la génétique de l'aquiculture (Asie-Canada) — Phase II**
Université Dalhousie, Nouvelle-Écosse. Assurer la coordination du réseau sur la génétique de l'aquiculture en Asie, acquérir de nouvelles connaissances de base en biologie et mettre au point de nouvelles méthodes de mesure, de nouveaux modèles génétiques et de nouveaux protocoles de sélection à l'appui des activités du réseau. 482 800 \$ — 36 mois.
- 89-1024 *Trifolium* et *rhizobium* (Afrique subsaharienne-Canada) — Phase II**
Centre international pour l'élevage en Afrique, Éthiopie, et l'Université de la Colombie-Britannique, Vancouver. Mettre au point un inoculant de *rhizobium* pour des variétés pérennes de trefle africain. 190 700 \$ — 36 mois.
- 89-1036 Séchoir passif des récoltes (Indonésie-Canada)**
Bogor Agricultural University et l'Université de Moncton, Nouveau-Brunswick. Fournir aux groupes de fermiers un bon système de séchoir passif qui leur permettra d'entreposer leur récolte ou de réaliser des produits séchés destinés au marché. 232 600 \$ — 24 mois.
- Sciences de la santé**
- 89-0022 Maladies sexuellement transmissibles (Sénégal)**
Université Cheikh Anta Diop, Dakar. Permettre à l'Institut des sciences et de l'environnement de parvenir à situer la prévalence des maladies sexuellement transmissibles dans leur contexte social, culturel et humain. 114 960 \$ — 18 mois.
- 89-0029 Opisthorchiasse (Thaïlande)**
Tropical Medicine and Public Health Project de la Southern Asian Ministers of Education Organization, Bangkok. Permettre au Département of Clinical Tropical Medicine de la Mahidol University de déterminer l'importance de la morbidité attribuable à l'opisthorchiasse dans les collectivités et les résultats des traitements, à l'appui de la prise de décisions au sujet de la lutte contre cette maladie. 218 260 \$ — 30 mois.
- 89-0041 Technologie anticonceptionnelle (Inde) — Phase V***
National Institute of Immunology, New Delhi. Mettre au point un vaccin contraceptif qui provoquera la production d'assez d'anticorps contre la gonadotrophine chorionique chez les femmes pour prévenir une grossesse et dont l'effet sera réversible et sans réactions secondaires. 698 150 \$ — 36 mois.
- 7. Les projets subventionnés conjointement avec une autre division paraissent sous le titre « Projets multivisionnaires ».**

89-0200 Biotecnologie du sésame et de l'éleusine (Inde)*
Tamil Nadu Agricultural University, Coimbatore. Permettre à l'école de génétique d'augmenter et de stabiliser les rendements et la qualité du sésame (*Sesamum indicum*) et de l'éleusine (*Eleusine coracana*) à l'aide de techniques de culture tissulaire et cellulaire. 168 410 \$ — 36 mois.

89-0202 WAFSRN (Afrique de l'Ouest) — Phase II
Semi-Arid Food Grain Research and Development Project, Burkina Faso. Permettre au Réseau de recherche sur les systèmes d'exploitation agricole de l'Afrique de l'Ouest (WAFSRN) de renforcer et de financer les programmes nationaux par la formation, la promotion du dialogue entre les chercheurs et l'amélioration de l'accès à l'information. 551 035 \$ — 36 mois.

89-0204 Arbres fruitiers (Thaïlande)
Université Chiang Mai. Permettre à sa faculté d'agriculture de mettre au point et de promouvoir des techniques de gestion pour incorporer les manières aux systèmes de culture intercalaire chez les petits paysans du nord de la Thaïlande. 149 580 \$ — 36 mois.

89-0215 Petits barrages (Côte d'Ivoire)*
Ministère de la recherche scientifique et de la culture. Permettre à l'Institut des savanes, l'Institut d'écologie tropicale, et le Centre ivoirien des recherches économiques et sociales, d'améliorer la production des microépêcheries en petites et moyennes retenues pour offrir plus d'emplois, de revenus et d'aliments riches en protéines aux populations rurales et aux petites villes au nord de la Côte d'Ivoire. 355 670 \$ — 36 mois.

89-0219 Ichtyo-génétique (Thaïlande) — Phase III
Ministère de l'Agriculture et des Coopératives, Bangkok. Permettre au National Aquaculture Genetics Institute de créer des lignées vraiment domestiquées de tilapie (*Oreochromis* sp.), de poisson-chat (*Clarias* sp.), de carpe commune (*Cyprinus carpio*), de crevette géante d'eau douce (*Macrobrachium rosenbergii*) et de bar (*Lates calceifer*) qui donneront un rendement supérieur en aquaculture ardsanale; de faire connaître ces lignées aux paysans thaïs; de former les chercheurs thaïs aux méthodes de recherche

89-0223 Décorateurs d'arachides (Sénégal)*
Centre national de recherches agronomiques de Bambey. Tester sur le terrain un décorateur d'arachides dans les régions rurales pour faciliter la production de quantités suffisantes de semences de bonne qualité et pour étudier ses aspects techniques et socioéconomiques. 55 300 \$ — 36 mois.

89-0228 Panneaux de nattes de bambou (Inde)
Indian Plywood Industries Research Institute, Bangalore. Mettre au point les technologies voulues afin de produire des panneaux de nattes de bambou de bonne qualité et à prix modique qui accroîtront les revenus des pauvres fabricants de nattes de bambou (en majorité des femmes de tribus) tout en réduisant la dépendance à l'égard du bois importé employé dans la fabrication de contreplaqué. 145 150 \$ — 36 mois.

89-0231 Transformations des graïnes oléagineuses (Kenya)
Université Egerton, Njoro. Promouvoir l'utilisation maximale des graïnes oléagineuses dans les régions rurales en adaptant, testant et introduisant un petit équipement de transformation de ces graïnes adapté à l'utilisation en voyage et en élaborant un processus de livraison de la technologie qui favorisera son incorporation efficace dans les entreprises rurales. 193 200 \$ — 36 mois.

89-0238 Légumineuses alimentaires (Burkina Faso) — Phase IV*
Ministère de l'enseignement supérieur et de la recherche scientifique, Ouagadougou. Permettre à l'Institut national d'études et de recherches agricoles d'entreprendre de mettre au point des cultivars de niébe de haut rendement mieux adaptés aux zones semi-arides et résistants aux maladies afin de minimiser les pertes de rendement lors des années de sécheresse et maximiser les récoltes pendant les années d'excès d'humidité. 275 915 \$ — 36 mois.

89-0239 Nutrition des poissons (Chine)
Université Zhongshan, Guangzhou. Mettre au point des régimes alimentaires pratiques pour l'élevage de la carpe grasse en Chine aussi bien qu'ailleurs en Asie en se servant de sous-produits agricoles faciles à

89-0249 Fertilité des sols (Ouganda)
Université Makerere, Kampala. Mieux comprendre le rôle de la faune dans la fertilité des sols afin d'offrir de meilleurs choix de gestion des sols aux paysans ougandais. 40 400 \$ — 24 mois.

89-0253 Réseau sur la banane et la banane plantain — INIBAP (Global) — Phase VI
CRD, Ottawa. Continuer à appuyer Réseau international pour l'amélioration de la banane et de la banane plantain (INIBAP), France. 200 000 \$ — 12 mois.

89-0259 Ichtyo-génétique (Philippines) — Phase II
Freshwater Aquaculture Center, Central Luzon State University, Nueva Ecija. Mettre au point une méthode de sélection convenant à des établissements ou à des paysans permettant de produire un meilleur stock de poissons et mettre au point des lignées supérieures de tilapia à meilleure croissance pour distribution aux fermiers. 115 000 \$ — 36 mois.

89-0271 Utilisation du soja (Nigéria-Ghana) — Phase II
Institut international d'agriculture tropicale, Ibadan. Mettre au point des techniques d'utilisation des pousses de soja adaptées aux foyers urbains et ruraux ainsi qu'aux petites entreprises afin de stimuler la production et de procurer à la population de meilleurs avantages économiques et sociaux. 403 200 \$ — 36 mois.

89-0279 Aide aux organisations locales (Afrique occidentale)*
Innovations et réseaux pour le développement, Suisse. Renforcer la capacité des organismes locaux qui font du développement rural à répondre aux besoins de leurs membres et améliorer le cadre institutionnel dans lequel ils opèrent. 349 418 \$ — 24 mois.

89-0292 Présence d'affatoxines dans le maïs (Philippines) — Phase II*
National Post Harvest Institute for Research and Extension, Manille. Déterminer l'efficacité des pratiques de postproduction prescrites aux paysans pour lutter contre la contamination par l'affatoxine et leurs répercussions économiques sur les paysans tout comme l'accueil que

- des régions rurales du nord du Cauca et du Valle del Cauca et promouvoir l'implantation de telles usines. 375 400 \$ — 36 mois.
- 89-0122 Systèmes d'exploitation agricole (Éthiopie) — Phase II*** Institut de recherche agricole, Addis Ababa. Renforcer la compétence de ceux du département d'économie agricole et de recherche sur les systèmes d'exploitation agricole pour qu'ils puissent diagnostiquer et réduire les obstacles que rencontrent les paysans en exécutant, après élaboration, des recherches, tant en ferme et en station de recherche, pour réduire ces obstacles, et appliquer ces recherches. 225 200 \$ — 36 mois.
- 89-0131 Technologie post-récolte pour la banane (Philippines)** University of the Philippines, Los Baños. Permettre au Postharvest Horticulture Training and Research Center d'améliorer les méthodes utilisées pour le transport et la manutention des bananes Saba à destination des marchés intérieurs, afin de réduire les pertes pour les producteurs, d'éliminer les prix à rabais faits aux agriculteurs et ainsi d'encourager les agriculteurs à accroître la production. 81 600 \$ — 36 mois.
- 89-0139 Transformation des produits forestiers (Pérou)** Instituto Nacional de Investigación Agraria y Agroindustrial, Lima. Déterminer les meilleures variétés d'un palmier-pêcher à des fins de culture et de transformation dans l'Amazonie péruvienne. 199 100 \$ — 36 mois.
- 89-0140 Séminaire de formation sur les pêches (Amérique latine)** Programa de Asistencia e Investigación Social, Chili. Offrir une formation de base théorique et pratique, quant à l'application du concept du développement intégré des côtes, aux vulgarisateurs qui travaillent au sein des collectivités dans le domaine des pêches artisanales. 78 560 \$ — 12 mois.
- 89-0141 Développement de la pêche (Chili) — Phase II** Universidad Católica de Chile, Talcahuano. Permettre au Departamento de Biología y Tecnología del Mar d'élargir et de finir de mettre en oeuvre un programme-pilote de développement de la pêche artisanale dans le complexe du développement côtier intégré, qui est l'un des secteurs de
- concentration de la région. 125 320 \$ — 18 mois.
- 89-0151 Systèmes d'agro-forestierie (Cameroun)** Conseil international pour la recherche en agroforestierie, Kenya. En collaboration avec l'Institut de recherches agronomiques, Njombé, mettre au point des technologies agro-forestières socio-économiquement viables, à l'appui d'une production animale et végétale accrue et durable à l'intention des petits agriculteurs des plaines à climat tropical humide du Cameroun et de l'Afrique occidentale. 214 250 \$ — 24 mois.
- 89-0153 Cibles de la tsé-tsé (Kenya)** Kenya Trypanosomiasis Research Institute, Kikuyu. Tester sur le terrain des cibles appâtées à la tsé-tsé, afin de lutter contre la tsé-tsé. 113 070 \$ — 24 mois.
- 89-0157 Développement côtier intégré : secteur de concentration en Amérique latine** Centro Peruano de Estudios para el Ecodesarrollo Marino, Lima. Coordonner et soutenir des activités de recherche et de développement portant sur les pêches artisanales et réalisées dans le cadre de projets nationaux de développement côtier intégré (qui est un secteur de concentration dans la région) au Brésil, au Chili, en Colombie et au Pérou. 74 950 \$ — 9 mois.
- 89-0158 Parasites des poissons (Malaisie) — Phase III** Universiti Pertanian Malaysia, Serdang. Permettre à la Faculty of Fisheries and Marine Sciences d'accroître la production de poissons d'eau douce en étudiant les mécanismes qui sous-tendent les relations hôte-parasite, en établissant des modèles de prophylaxie et de traitement des maladies des poissons, et en constituant une base de données sur les virus des poissons. 210 000 \$ — 36 mois.
- 89-0162 Réseau latinoaméricain de recherche sur la banane (INIBAP)** Fournir au Réseau international pour l'amélioration de la banane et de la banane plantain (INIBAP), France, des fonds qui serviront à consentir de petites subventions à des personnes et à des établissements en Amérique latine et dans les Antilles afin de favoriser de nouvelles et de plus amples recherches sur les bananes et les bananes plantains. 50 000 \$ — 13 mois.
- 89-0166 Systèmes de pisciculture à petite échelle (Kenya)*** Université de Nairobi. Accroître les revenus des paysans marchandes de poisson en les formant à des méthodes améliorées de production, de transformation et de commercialisation du *Lates niloticus* et de l'omema (*Engaulicypis*). 201 500 \$ — 36 mois.
- 89-0172 Sorgho/mil alimentaires et fourragers (Kenya)** Université de Nairobi, Kenya. Favoriser la production de céréales résistantes à la sécheresse, soit le sorgho et le mil, dans des terres arides et semi-arides en liant entre eux les travaux de recherche appliquée déjà faits, en appliquant les résultats de la recherche, en formulant une politique et en catalysant de nouvelles recherches. 189 000 \$ — 36 mois.
- 89-0181 Systèmes de riziculture (Bhoutan) — Phase II*** Institut international de recherche sur le riz (IRRI), Philippines. Permettre au Département d'agriculture, Thimphu, de donner des compétences au personnel du département d'agriculture dans la recherche sur les systèmes de riziculture. 418 490 \$ — 45 mois.
- 89-0188 Systèmes d'alimentation des canards (Indonésie) — Phase II*** University of Brwajaya, Malang. Permettre à la Faculty of Animal Husbandry d'améliorer les systèmes d'alimentation des canards et la productivité de l'élevage, en utilisant des aliments indigènes. 66 360 \$ — 36 mois.
- 89-0189 Agriculture sur les hautes terres (Philippines)** Visayas State College of Agriculture, Baybay. Permettre au Farming and Resource Management Institute d'améliorer la productivité, les revenus et la durabilité des ménages paysans des hautes terres dans l'est de Visayas. 92 310 \$ — 24 mois.
- 89-0191 Systèmes de production de rechange (Colombie) — Phase IV** Fundación para la Aplicación y Enseñanza de las Ciencias, Cali. Renforcer la capacité de l'université rurale de compléter et documenter les essais à long terme en gestion des sols et production durable entrepris durant les phases précédentes. 243 000 \$ — 36 mois.

Permettre au Desert Development Center de documenter et d'évaluer l'information sur les aspects techniques, économiques et sociaux de l'utilisation de l'eau dans les terres récupérées en s'attachant plus particulièrement au Tahrir du sud. 17 750 \$ — 3 mois.

89-0109 Réseau de recherche sur les tubercules alimentaires (Afrique australe et orientale) — Phase II
Institut international d'agriculture tropicale, Nigéria. Renforcer les capacités des programmes nationaux participants au moyen du perfectionnement de la main d'œuvre et d'autres formes d'aide directe, afin qu'ils puissent répondre aux besoins en matière de recherche de leurs programmes sur les tubercules alimentaires et à ceux de la région. 441 000 \$ — 36 mois.

89-0113 Arbres fixant l'azote (Amérique centrale) — Phase III
Centro Agronómico Tropical de Investigación y Enseñanza, Costa Rica. Mettre au point du matériel de reproduction et des techniques de culture et de gestion améliorées pour des essences d'arbres de la famille des légumineuses appartenant aux genres *Erythrina*, *Glyricidia* et *Inga*, et promouvoir l'intégration de ces espèces aux systèmes d'agroforesterie des petites exploitations agricoles situées sous les tropiques. 555 000 \$ — 36 mois.

89-0114 Sylviculturages (Costa Rica) — Phase II
Centro Agronómico Tropical de Investigación y Enseñanza, Turrialba. Mettre au point des systèmes de production agricole durables convenant aux petits agriculteurs de la région de l'Atlantique, au Costa Rica, dans le but d'accroître la productivité des terres et le revenu tiré de l'agriculture. 420 500 \$ — 36 mois.

89-0115 Élevage de cobayes (Pérou) — Phase II*
Instituto Nacional de Investigación Agraria y Agroindustrial, Lima. Mettre au point des technologies appropriées pour l'amélioration des systèmes d'élevage du cobaye, une source importante de protéine dans les familles à faible revenu. 321 000 \$ — 36 mois.

89-0119 Station rurale pour la transformation des aliments (Colombie) — Phase III
Fundación para la Aplicación y Enseñanza de las Ciencias, Cali. Faire des recherches sur la faisabilité de l'établissement de petites usines

d'un coordinateur scientifique. 124 700 \$ — 18 mois.

89-0065 Production de larves marines (Amérique latine)
Universidad del Norte - Centro Coquimbo, Chili. Contribuer à la formation de chercheurs et de technologistes et à l'échange d'expériences entre ces derniers pour développer la production de larves et l'élevage d'espèces marines, particulièrement de mollusques filtreurs. 100 000 \$ — 24 mois.

89-0066 Chachafruto (Colombie) — Phase II
Corporación Nacional de Investigación y Fomento Forestal, Bogotá. Accroître la productivité d'autres sources de protéines végétales dans les Andes par la promotion de la culture du chachafruto (*Erythrina edulis*) dans les systèmes agro-silvo-pastoraux. 83 700 \$ — 36 mois.

89-0067 Coordinateur de réseaux (Afrique australe) — Phase II
Division des Sciences de l'Agriculture, de l'alimentation et de la nutrition, CRDI, Kenya. Créer un réseau pour appuyer les chercheurs, assurer une bonne liaison et coordination entre eux et leur fournir des conseils techniques. 73 805 \$ — 24 mois.

89-0068 Plantations d'arbres — Phase II
Forestry Association of Botswana, Gaborone. Déterminer des essences d'arbres susceptibles de procurer du bois de chauffage et d'autres avantages aux habitants et collectivités des régions rurales semi-arides de l'est du Botswana, ainsi que des méthodes d'implantation et d'entretien fiables pour ces essences. 334 100 \$ — 36 mois.

89-0071 Centre de distribution de semences d'espèces agroforestières (Philippines)
University of the Philippines, Los Baños. Permettre à son département d'agronomie de promouvoir l'approvisionnement continu en semences de bonne qualité des organisations (gouvernementales et non gouvernementales) oeuvrant à la mise en valeur des hautes terres, et de créer des compétences locales en techniques de production et de distribution de semences. 16 290 \$ — 15 mois.

89-0094 Étude sur les eaux de culture en zone saharienne (Égypte)
American University of Cairo.

I'hallotide et l'oursin) dans une anse ou pêchent de petits pêcheurs, Cateia Quintay, dans le centre du Chili. 67 270 \$ — 20 mois.

89-0049 Système du piedmont de l'Amazonie (Pérou)
North Carolina State University Mission to Peru, Lima. Permettre à l'Instituto Nacional de Investigación Agraria y Agroindustrial d'identifier trois espèces de bois d'œuvre à croissance rapide afin que les petits agriculteurs de fruits, de café et de cacao profitent directement de l'utilisation de leurs terres en pente de faible rendement pour produire du bois destiné à la construction des boîtes de fruits. 25 960 \$ — 12 mois.

89-0051 Agroforesterie (Inde)*
Indian Council of Agricultural Research, New Delhi. Permettre au National Research Centre in Agroforestry and the Indian Grassland et au Fodder Research Institute de mettre au point et d'éprouver des technologies d'agroforesterie pour augmenter la productivité et la durabilité des systèmes de production agricole afin d'améliorer le gagne-pain des habitants de la région de Bundelkhand. 370 000 \$ — 60 mois.

89-0052 Culture tissulaire d'arbres à usages multiples (Afrique)
Centre international pour l'élevage en Afrique, Éthiopie. Mettre au point des systèmes de culture *in vitro* des essences africaines d'*Acacia* et d'*Erythrina* et de former des techniciens à la technologie *in vitro*. 82 450 \$ — 24 mois.

89-0058 Système de production d'huile et de protéines végétales (Kenya) — Phase III
Université Egerton, Njoro. Créer un programme intégré de recherche et de développement du système kenyan de production d'huile et de protéines végétales, qui visera l'élimination des obstacles à la production des graines oléagineuses, à la transformation et à l'utilisation d'huiles comestibles et de tourteaux de protéines. 698 400 \$ — 36 mois.

89-0062 Réseau asiatique sur la santé des poissons (Asie)
Division des sciences de l'agriculture, de l'alimentation et de la nutrition, CRDI, Singapour. Poursuivre la mise sur pied d'un réseau asiatique sur la santé des poissons et de plusieurs projets envisagés par le CRDI sur la santé des poissons en fournissant au réseau les services

Sciences de l'agriculture, de l'alimentation et de la nutrition⁶

89-0007 Réseau sur les méthodes de recherche en systèmes agricoles (Amérique latine)
Grupo de Investigaciones Agrarias, Chili. Etablir formellement et consolider un réseau de méthodes de recherche sur les systèmes agricoles (RIMISP), en vue d'augmenter l'efficacité des institutions latino-américaines lorsqu'il s'agit de mettre au point et de transférer des technologies appropriées pour les petites exploitations agricoles. 215 400 \$ — 36 mois.

89-0012 Sous-produits (Nigéria) — Phase II
Obafemi Awolowo University, Ile Ife. Permettre au Département of Animal Science de mettre au point des technologies d'alimentation du mouton basées sur des sous-produits agricoles, et de procéder à des essais en ferme. 170 400 \$ — 36 mois.

89-0013 Élevage du lapin (Ouganda)
Makerere University, Kampala. Permettre à la Faculty of Agriculture and Forestry, Département of Animal Science, de mettre à l'essai et d'évaluer des méthodes améliorées d'élevage du lapin dans les petites exploitations agricoles, afin d'accroître les sources d'approvisionnement en viande et d'améliorer la nutrition. 130 100 \$ — 36 mois.

89-0014 Aide à l'établissement du CARDI (Antilles)
Caribbean Agricultural Research and Development Institute (CARDI), Trinité. Augmenter son budget de base et ainsi faciliter la transition entre l'ancienne structure organisationnelle de l'institut et sa nouvelle structure. 240 000 \$ — 24 mois.

89-0015 Pêches fluviales (Sénégal)
Institut sénégalais de recherches agricoles, Dakar. Permettre au Centre de recherches océanographiques de Dakar-Thiaroye d'implanter des bases pour l'augmentation de la production halieutique et piscicole dans le bassin du Fleuve Sénégal. 219 600 \$ — 36 mois.

6. Les projets subventionnés conjointement avec une autre division paraissent sous le titre « Projets multidivisionnaires ».

89-0016 Transformation du manioc (Colombie) — Phase II
Centro Internacional de Agricultura Tropical, Cali. Faire une étude de faisabilité sur l'établissement d'une agro-industrie de la transformation du manioc dans une collectivité colombienne où le manioc est déjà cultivé, en y intégrant les aspects production, transformation et marketing dans des conditions réelles de marché. 210 500 \$ — 24 mois.

89-0017 Développement régional de l'aquaculture (Amérique latine)
Fundación para la Educación Superior, Colombie. Permettre au réseau régional de l'aquaculture de favoriser le développement de l'aquaculture en Amérique latine en renforçant la capacité de recherche, de planification et de formation des membres du centre d'aquaculture du réseau. 226 240 \$ — 36 mois.

89-0018 Batteuses de soja (Nigéria)
Obafemi Awolowo University, Ibadan. Permettre à l'Institut of Agricultural Research and Training de mettre au point des batteuses de soja mécaniques peu coûteuses à l'intention des petits agriculteurs du Nigéria. 191 500 \$ — 36 mois.

89-0019 Conservation de la banane plantain (Côte d'Ivoire)
Université d'Abidjan. Permettre à son Département de biochimie d'améliorer les méthodes traditionnelles de conservation des bananes plantains en Côte d'Ivoire afin d'assurer une production accrue de bananes plantains de meilleure qualité pour le bénéfice des consommateurs. 159 300 \$ — 36 mois.

89-0020 Foresterie paysanne (Malawi)
Ministry of Agriculture, Lilongwe. Permettre au Département of Agricultural Research d'améliorer ou de stabiliser les composantes agricoles, élevages et arboriculture des petites exploitations agricoles, en mettant au point des technologies agro-forestières appropriées. 216 495 \$ — 36 mois.

89-0021 Gestion du bassin hydrographique (Colombie)
Universidad Nacional de Colombia, Bogotá. Permettre à la Faculté d'agronomie de trouver des mécanismes qui encourageront les petits exploitants agricoles à intégrer l'arboriculture à divers systèmes agricoles, et ainsi d'améliorer la conservation des sols avec un

89-0026 Évaluation de l'adoption de technologies (Chili) — Phase II
Centro de Estudios para América Latina sobre Desarrollo Rural, Pobreza y Alimentación, Santiago. Contribuer à la mise au point et à la diffusion de technologies appropriées à l'intention des petits exploitants agricoles chiliens et de définir les facteurs essentiels du succès des stratégies de vulgarisation. 199 400 \$ — 36 mois.

89-0036 Réseau de systèmes d'élevage du bétail (Amérique latine) — Phase II
Instituto Interamericano de Cooperación para la Agricultura, Costa Rica. Renforcer le réseau de recherche groupant des organisations nationales, régionales et internationales d'Amérique latine pour la création et le transfert de meilleurs systèmes de production animale à l'intention des petits paysans. 557 220 \$ — 36 mois.

89-0038 Légumineuses à grains (Népal) — Phase II*
Ministère d'agriculture, Kamanadou. Permettre au National Agricultural Research and Services Centre d'augmenter et de soutenir la production et la productivité des légumineuses à grains en renforçant le programme national d'amélioration des légumineuses à grains. 268 540 \$ — 36 mois.

89-0039 Scolyte des graines de café (Mexique) — Phase II*
Centro de Investigaciones Ecológicas del Sureste, Tapachula. Consulter et institutionnaliser un programme de lutte biologique contre le scolyte des graines de café au Mexique. 198 080 \$ — 24 mois.

89-0040 Camélidés sud-américains (Pérou) — Phase III*
Universidad Nacional Mayor de San Marcos, Lima. Permettre à l'Instituto Veterinario de Investigaciones Tropicales y de Altura de mettre au point des systèmes améliorés de production d'alpaga à l'intention des petites exploitations agricoles des hautes terres. 238 600 \$ — 36 mois.

89-0048 Invertébrés / algues marines (Chili) — Phase III
Pontificia Universidad Católica de Chile, Santiago. Permettre à la Facultad de Ciencias Biológicas de lancer une expérience pilote de transfert de technologies de repensemement et de gestion des crustacés et mollusques (surtout

- 89-0289 Empoisonnement par les pyréthroides (Chine) — Phase II***
Institut of Occupational Medicine, Beijing, Confirmer et faire connaître les résultats obtenus au cours de la phase I du projet sur les pyréthroides et mettre au point des moyens sûrs d'employer ce pesticide et d'autres à grande échelle. 57 845 \$ — 24 mois. COMM-SSAN.
- 89-0295 Achat, exploitation et maintenance de l'équipement scientifique (Afrique australe et orientale)**
Fondation internationale pour la science, Suède. Faciliter la formation d'un réseau de techniciens principaux dans la région, qui collaboreront aux décisions touchant l'achat et l'entretien de l'équipement de recherche scientifique. 150 000 \$ — 24 mois. DB-SSAN-STG.
- 89-0298 Effet du projet Kabuhi (Philippines)**
Capiz Research, Extension and Development Consortium, Roxas City, Etudier l'effet sur les bénéficiaires et les collectivités des divers projets « Kabuhi » qui visent à offrir de la formation aux ménagères de faible revenu en milieu rural. 22 230 \$ — 12 mois. DB-SSOC.
- 89-0304 La communication au service de la santé (Rwanda-Camada)**
Université nationale du Rwanda, Butare, et l'Université du Québec à Chicoutimi. Permettre aux chercheurs et aux services gouvernementaux compétents d'initier la production des essences végétales et plus généralement de maîtriser les conditions du développement d'une petite industrie de la valorisation des matières premières végétales locales. 308 118 \$ — 24 mois. SI-STG.
- 89-1007 Brique cuite (Rwanda-Camada)**
Université nationale du Rwanda, Butare, et l'Université de Sherbrooke, Québec. Optimiser la production artisanale de la brique en argile cuite afin de rendre disponible un logement durable à coût bas. 266 800 \$ — 48 mois. SSOC-STG.
- 89-1012 Pesticides végétaux (Thaïlande-Canada)**
Université Chiang Mai et l'Université d'Ontario, Meïtre au point des insecticides et des substances antiparasitaires sûrs à partir de plantes de Thaïlande au moyen d'une approche interdisciplinaire. 419 600 \$ — 24 mois. SAAN-SSAN.
- 89-0252 Modèles et stratégies de crédit aux petits paysans (Colombie)**
Fundación para la Aplicación y la Enseñanza de las Ciencias, Cali. Déterminer les modèles et les stratégies de formation convenant le mieux à l'offre de crédit aux petits paysans et systématiser cette connaissance et son application sociale par la publication d'une étude de cas. 100 000 \$ — 36 mois. SAAN-SSOC.
- 89-0265 Systèmes pastoraux maghrébins (Algérie) — Phase II***
Ministère de l'enseignement supérieur, Alger. Améliorer, de manière durable, la production et le niveau de vie des pasteurs et agropasteurs petits et moyens résidents de la steppe algérienne, tout en arrêtant la dégradation physique de la steppe en permettant sa régénération. 249 830 \$ — 36 mois. SAAN-SSOC.
- 89-0266 Systèmes pastoraux maghrébins (Maroc) — Phase II***
Institut national agronomique et vétérinaire, Rabat. Contribuer à l'établissement de modalités pratiques pour une gestion appropriée des ressources pastorales, qui permet d'améliorer les conditions de vie des pasteurs tout en sauvegardant les parcours. 248 850 \$ — 36 mois. SAAN-SSOC.
- 89-0267 Systèmes pastoraux maghrébins (Tunisie) — Phase II***
Ministère de l'agriculture, Tunis. Permettre à l'Institut des régions arides de contribuer à l'élaboration d'une meilleure approche de développement de la steppe tunisienne, qui permettra une amélioration des conditions de vie et de travail des populations et en même temps réduira la dégradation de l'environnement. 248 760 \$ — 36 mois. SAAN-SSOC.
- 89-0268 Réseau des petits ruminants (Asie)***
Central Research Institute for Animal Science, Indonésie. Renforcer la recherche et le développement sur les petits ruminants en établissant des relations pratiques et efficaces entre les programmes nationaux. 510 660 \$ — 48 mois. COMM-DB-SSAN-SSOC.
- 89-0320 Création de compétences en analyse microbiologique de la qualité de l'eau (Canada)**
National Water Research Institute, Ontario, et Nations cibles, Bande de Split Lake, Manitoba. Évaluer la possibilité d'utiliser un système

- 89-0057 Entreprises rurales (Amérique latine)**
Instituto Latinoamericano de Fomento Agroindustrial, Costa Rica. Améliorer la probabilité que les résultats de la recherche soient appliqués aux projets de développement d'entreprises rurales en Amérique latine. 339 300 \$ — 24 mois. DB-SAAAN-SSAN-STG.
- 89-0101 Mobilisation des ressources du secteur privé pour la promotion de l'immunisation (Indonésie)**
Yayasan Kusuma Buana, Jakarta. Démontrer qu'il est possible d'adapter des technologies et des stratégies modernes de marketing à des fins d'information, d'éducation et de promotion en matière d'immunisation. 87 480 \$ — 24 mois. COMM-SSAN.
- 89-0106 Centre sous-régional de documentation et d'informations scientifiques et techniques — CESODIST (Afrique centrale)**
Union douanière et économique de l'Afrique centrale, République centrafricaine. Renforcer la coopération scientifique sous-régionale par l'organisation d'un système d'information coordonné par le CESODIST en appui aux activités de programmation de la recherche et de la diffusion des résultats de recherche. 184 805 \$ — 36 mois. DB-SI.
- 89-0111 Enseignement de la nutrition aux jeunes femmes (Inde)**
Nutrition Foundation of India, New Delhi. Mettre au point des modèles appropriés pour l'éducation des adolescentes en matière de nutrition et de formation professionnelle, afin d'améliorer la qualité de la vie des habitants des régions rurales de l'Inde. 243 500 \$ — 24 mois. COMM-DB-SAAAN.
- 89-0147 Enseignement supérieur et recherche et développement dans les universités africaines (Afrique)**
Association des universités africaines, Ghana. Relancer et renforcer l'enseignement supérieur et de la recherche et au développement en Afrique, surtout dans des domaines universitaires à mettre au point des mécanismes de coopération et de partage des ressources. 77 760 \$ — 12 mois. BPE-DB-SAAAN.
- 89-0187 Stratégies de communication pour la prévention de l'abus des drogues (Pérou)**
Centro de Información y Educación
- 89-0212 Système d'information APPROTECH-Asia sur l'eau et l'assainissement — Phase II**
Philippine Social Development Center. Renforcer les compétences de certaines organisations non gouvernementales nationales et provinciales du groupe APPROTECH-Asia afin qu'elles s'occupent d'activités d'information à l'appui de leurs programmes communautaires touchant l'eau et l'assainissement. 307 720 \$ — 36 mois. DB-SI-SSAN.
- 89-0218 Nutrition des enfants et agriculture (Nigéria)**
Afin de permettre à la Obaferi Awolowo University, Nigéria, d'évaluer l'impact de la modernisation de l'agriculture sur la santé et l'état nutritionnel des enfants de 0 à 10 ans et de leur mère dans la région du projet Oyo North Agencultural Development (ONADEP), et de proposer les politiques indiquées pour améliorer la nutrition. 236 000 \$ — 24 mois. SAAAN-SSAN.
- 89-0221 « The Family House » : feuilleton télévisé sur l'hygiène publique (Égypte)**
Centre for Development Communications, Giza. Faire davantage prendre conscience au grand public de certains problèmes de santé publique et de lui enseigner les règles et les pratiques voulues grâce à une utilisation novatrice du divertissement par les médias de masse. 117 000 \$ — 30 mois. COMM-SSAN.
- 89-0222 Travaillieuses et leurs enfants : risques et besoins en santé (Mexique)**
Population Council, E.-U. Permettre à son bureau régional du Mexique d'examiner les risques spécifiques et conditions de travail pour la mère et les enfants aussi bien que l'effet sur la santé des arrangements inadéquats de garde. 242 930 \$ — 30 mois. SSAN-SSOC.
- 89-0241 Faïm saisonnière et nutrition (Kenya)**
Egerton University, Njoro. Permettre au Department of Home Economics de fournir des informations détaillées sur l'état nutritionnel des travailleurs agricoles sans terre comparativement à celui de ceux qui ont de petites parcelles dans la même région. Il tentera aussi de déterminer si l'état nutritionnel des familles de ces travailleurs est affecté par les pénuries alimentaires saisonnières. 56 097 \$ — 18 mois. SAAAN-SSAN.
- 89-0248 Mass media et hygiène buccale (Kenya)***
Mazingira Institute, Nairobi. Diffuser les résultats d'un projet de recherche antérieur qui a démontré que des
- 89-0210 Nutrition communautaire intégrée (Thaïlande)**
Mahidol University, Bangkok, en collaboration avec l'Université de Khon Kaen, le ministère de l'Agriculture et des Coopératives et le ministère de la Santé publique. Mettre au point et en application, par une approche de recherche pluridisciplinaire, des programmes d'amélioration nutritionnelle pour le nord-est de la Thaïlande. 214 400 \$ — 18 mois. COMM-DB-SAAAN-SSAN-SSOC.
- 89-0212 Système d'information APPROTECH-Asia sur l'eau et l'assainissement — Phase II**
Philippine Social Development Center. Renforcer les compétences de certaines organisations non gouvernementales nationales et provinciales du groupe APPROTECH-Asia afin qu'elles s'occupent d'activités d'information à l'appui de leurs programmes communautaires touchant l'eau et l'assainissement. 307 720 \$ — 36 mois. DB-SI-SSAN.
- 89-0206 Foresterie paysanne (Chine)**
Chinese Academy of Forestry, Beijing. Maximiser l'utilisation productive et durable des rares ressources foncières et forestières au profit des producteurs et des consommateurs et renforcer la capacité de l'Académie d'entreprendre des recherches intégrées dont la qualité, la cohérence, la portée et l'impact seront toujours plus grands. 1 128 670 \$ — 36 mois. BT-DB-SAAAN-SI-SSOC.
- 89-0210 Nutrition communautaire intégrée (Thaïlande)**
Mahidol University, Bangkok, en collaboration avec l'Université de Khon Kaen, le ministère de l'Agriculture et des Coopératives et le ministère de la Santé publique. Mettre au point et en application, par une approche de recherche pluridisciplinaire, des programmes d'amélioration nutritionnelle pour le nord-est de la Thaïlande. 214 400 \$ — 18 mois. COMM-DB-SAAAN-SSAN-SSOC.
- 89-0212 Système d'information APPROTECH-Asia sur l'eau et l'assainissement — Phase II**
Philippine Social Development Center. Renforcer les compétences de certaines organisations non gouvernementales nationales et provinciales du groupe APPROTECH-Asia afin qu'elles s'occupent d'activités d'information à l'appui de leurs programmes communautaires touchant l'eau et l'assainissement. 307 720 \$ — 36 mois. DB-SI-SSAN.

la nutrition, qui viennent de pays en
développement et qui font leur
maîtrise ou leur doctorat au Canada.
113 276 \$ — 6 mois.

Projets multidisciplinaires⁵

89-0031 Programme intégré
d'intervention sanitaire pour lutter
(Thaïlande)
Université Khon Kaen. Créer et tester
un programme communautaire
intégré d'intervention en santé pour
réduire l'incidence de la diarrhée
chez les enfants dans le nord-est de la
Thaïlande. 189 460 \$ — 30 mois.
SSAN-SSOC.

89-0047 Série de formation en
gestion de l'information (Asie du
Sud-Est)
Université Saints Malaysia; Southeast
Asian Regional Center for Graduate
Study and Research in Agriculture,
Philippines; et le Asian Institute of
Technology (AIT), Thaïlande.
Assurer que les participants
apprennent les techniques de
conditionnement et de consolidation
de l'information. 646 650 \$ —
36 mois. DB-SI.

89-0050 Réseau et système
d'information nationaux pour la
Jamaïque : programme
d'éducation publique
National Council on Library and
Archives Development Systems,
Kingston. Lancer un programme
soutenu d'éducation du public ou une
campagne de relations publiques qui
visera à faire prendre davantage
conscience aux gens de l'information
à leur disposition et à en favoriser
une utilisation plus grande; et à
augmenter le soutien financier aux
services d'information. 110 000 \$ —
24 mois. COMM-SI.

⁵ Les projets de cette section sont
financés conjointement par plusieurs
divisions. BD = Bureau de direction;
BPE = Bureau de la planification et de
l'évaluation; BT = Bureau du trésorier;
COMM = Division des communications;
DB = Division des bourses; SAAN =
Division des sciences de l'agriculture, de
l'alimentation et de la nutrition; SI =
Division des sciences de l'information;
SSAN = Division des sciences de la santé;
SSOC = Division des sciences sociales;
STG = Division des sciences de la terre et
du génie.

géographie tropicale et à l'Institut
supérieur de gestion de mettre en
place un cycle de formation sur la
formulation, l'analyse et le développement
projets de recherche-développement
en sciences sociales. 33 542 \$ —
6 mois.

89-0286 Détermination des
priorités de recherche et
élaboration de propositions de
recherche (Moyen-Orient)*
Suez Canal University, Égypte.
Permettre à sa Faculté de médecine
d'aider les participants à acquérir les
compétences voulues pour dresser de
bons plans méthodologiques pour
étudier les questions prioritaires en
santé. 73 000 \$ — 6 mois.

89-0300 Atelier sur l'exploitation
du projet SPSS (Afrique centrale
et occidentale)*
Regional Institute for Population
Studies, Ghana, en collaboration avec
le Ghana Institute for Management
and Public Administration. Accroître
les compétences des démographes,
des sociologues et des statisticiens
des pays anglophones dans le
Statistical Package for the Social
Sciences (SPSS). 42 015 \$ — 6 mois.

89-0307 Programme de stagiaires
(Global) — Phase III
Division des bourses, CRDI. Fournir
des possibilités de formation à des
candidats venant d'organisations ou
de projets envers lesquels le CRDI
s'est expressément engagé.
150 000 \$ — 24 mois.

89-1003 Atelier sur la gestion de
la recherche (Global-Canada) —
Phase II
Université du Manitoba, Winnipeg.
Permettre au Département d'écono-
mie agricole et gestion de ferme de
donner à un groupe d'étudiant(e)s de
leurs études au Canada (en général au
niveau de la maîtrise et du doctorat)
dans les domaines de l'agriculture et
des ressources connexes un aperçu
des connaissances et compétences
nécessaires à la gestion de la re-
cherche. 80 270 \$ — 6 mois.

89-1046 Atelier sur la gestion de
la recherche (Global-Canada) —
Phase III
Université du Manitoba, Winnipeg.
Permettre à son Département
gestion des fermes d'offrir un cours
de formation de 18 jours sur
l'application des principes de gestion
à la recherche agricole à des
stagiaires financés par la Division des
bourses et la Division des sciences de
l'agriculture, de l'alimentation et de

89-0207 Formation des
administrateurs supérieurs des
universités en Amérique centrale et
dans les Antilles espagnoles
Fundación Interamericana de Costa
Rica, San José. Aider les décideurs et
les administrateurs de l'enseignement
supérieur (vice-présidents, doyens,
chefs de département, par exemple) à
établir un mécanisme permanent
d'analyse critique et de réflexion sur
l'orientation de cet enseignement
dans leur pays. 53 050 \$ — 12 mois.

89-0255 Informatique
documentaire, MINISIS
(Cameroun)
Yaoundé. Acquérir une bonne
maîtrise du projetel MINISIS pour,
d'une part, gérer efficacement son
système documentaire, et d'autre
part, servir de cadre de formation
pour les professionnels de la région
qui en feront la demande.
35 550 \$ — 12 mois.

89-0256 Les micro-ordinateurs et
la recherche en éducation (Kenya)
Université Egerton, Njoro. Former
les chercheurs principaux en
éducation à la recherche en éducation
et à l'analyse et à la gestion des
données par micro-ordinateurs.
56 250 \$ — 6 mois.

89-0257 Cours sur la
manipulation et la gestion des
données expérimentales
agrorforestières (Afrique australe,
centrale et orientale)*
Conseil international pour la
recherche en agrorforestierie (ICRAF),
Kenya. Former jusqu'à 15
techniciens engagés dans des projets
d'agrorforestierie appuyés par
l'ICRAF ou le CRDI dans la
manipulation et la gestion des
données expérimentales. 53 000 \$ —
6 mois.

89-0258 Marketing des sciences
de l'information et de la
documentation (Afrique centrale et
occidentale et le Maghreb)*
Centre national de documentation,
Maroc. Former une quinzaine de
formateurs francophones aux
techniques de marketing et de
promotion des services de
documentation et d'information en
vue d'élever le taux d'utilisation des
produits documentaires dans ces
régions. 51 090 \$ — 24 mois.

89-0263 Elaboration et gestion de
projets en sciences sociales
(Afrique centrale et occidentale)*
Université Marien Ngouabi, Congo,
et l'Université d'Abidjan, Côte
d'Ivoire. Permettre à l'Institut de

un profil du spécialiste, d'évaluer l'efficacité et la pertinence des programmes pédagogiques et de déterminer les besoins documentaires des spécialistes ainsi que leur comportement. 75 846 \$ — 36 mois.

89-0283 Évaluation de la qualité de l'eau par la collectivité à Kibwezi (Kenya)*
Fondation africaine de médecine et de recherches (AMREF), Nairobi. Encourager l'emploi de techniques d'évaluation communautaires qualitatives dans les projets sur l'eau et l'hygiène, en faisant connaître la conception, l'adaptation et l'application de la méthode d'évaluation minimale de l'Organisation mondiale de la santé inspirée du projet de l'AMREF sur l'approvisionnement en eau à Kibwezi. 17 038 \$ — 12 mois.

89-0284 Service de reportages scientifiques et technologiques (Kenya) — Phase III*
Africa Church Information Service, Nairobi. Permettre au All Africa Press Services de maintenir et d'améliorer son Service de reportages scientifiques et techniques pendant et en langues vernaculaires pendant le développement pour en améliorer les liens avec les usagers de cette recherche. 41 586 \$ — 12 mois.

Division des bourses⁴

89-0001 Académie de droit international de La Haye (Global) Académie de droit international de La Haye, Pays-Bas. Participer à la formation de jeunes juristes de pays en développement sur divers aspects de droit international à l'académie même; et de donner au Canada l'occasion d'appuyer les programmes de formation de l'académie à l'intention des praticiens et des chercheurs du domaine juridique dans le Tiers-Monde. 30 000 \$ — 12 mois.

4. Les projets subventionnés conjointement avec une autre division paraissent sous le titre « Projets multidivisionnaires ».

89-0009 Formation en études de la condition féminine (Thailande) Université Chiang Mai. Permettre à la faculté des sciences sociales d'aider une variété d'intervenante(s) de différents organismes et ONG de partout dans le pays qui s'intéressent aux programmes touchant la condition féminine et à la recherche et au développement en matière de politiques, en vue de renforcer leur capacité de préparer, d'analyser et de présenter des résultats de recherche conceptuellement et méthodologiquement exacts. 20 038 \$ — 12 mois.

89-0010 Formation universitaire et utilisation de la recherche par les gouvernements locaux (Colombie) Pontificia Universidad Javeriana, Bogotá. Permettre à la Facultad de Estudios Interdisciplinarios de former un groupe de fonctionnaires des gouvernements locaux à l'utilisation de la recherche en analysant les problèmes auxquels ils font face dans leur domaine respectif de travail. 48 600 \$ — 24 mois.

89-0046 Formation en gestion de la recherche (Asie du Sud-Est) Southeast Asian Regional Center for Graduate Study and Research in Agriculture, Philippines. Permettre au Centre de gestion de la recherche, en collaboration avec l'University of the Philippines, Los Baños, d'aider à créer un cadre de gestionnaires de la recherche qui connaîtront non seulement les techniques de la bonne recherche, mais aussi la gestion d'un institut de recherche. 157 555 \$ — 30 mois.

89-0072 Séminaire de formation : éducation, emploi et travail (Afrique) Institut international de planification de l'éducation, France. Faire participer quinze importants chercheurs et conseillers en politique à un cours intensif sur les liens entre l'éducation, le travail et la productivité en Afrique australe et orientale. 25 000 \$ — 5 mois.

89-0083 Automatisation des bibliothèques (Zimbabwe) Université du Zimbabwe, Harare. Favoriser le partage des ressources dans la région en offrant une série de cours encore à mettre au point dans le domaine des sciences de l'information, à commencer par l'automatisation des services de bibliothèque. 69 000 \$ — 6 mois.

89-0143 Développement des ressources humaines en Amérique latine
Facultad Latinoamericana de Ciencias Sociales, Chili. Faire des études des programmes actuels de formation à la recherche au Brésil, au Chili, en Colombie et au Mexique, visant à renforcer les capacités indigènes de formation institutionnelle, et de favoriser les activités locales à l'appui de la mise en place d'un mécanisme régional d'échange de chercheurs. 61 995 \$ — 15 mois.

89-0144 Collaboration d'une politique nationale pour les programmes de doctorat (Colombie) Universidad Nacional de Colombia. Préparer les éléments nécessaires à la formulation d'une politique nationale pour l'établissement de doctorat dans les programmes de doctorat d'enseignement supérieur. 50 000 \$ — 6 mois.

89-0145 Cours sur les méthodes de recherche en ferme sur les ressources pour l'alimentation du bétail (Afrique australe et orientale) — Phase III
Centre international pour l'élevage en Afrique, Ethiopie. Compléter et renforcer les activités de recherche et d'échange du Réseau sur les pâturages de l'Afrique australe et orientale en formant 20 biologistes d'expérience à la création de tests menés sur le terrain. 50 700 \$ — 6 mois.

89-0203 Institutions de crédit pour la formation scientifique en Amérique latine
Asociación Panamericana de Instituciones de Crédito Educativo, Colombie. Déterminer les types de prêts accordés pour les études supérieures dans certains pays d'Amérique latine et les analyser en fonction de leur efficacité et de leurs résultats pour faire des comparaisons analytiques entre les divers modèles observés. 59 520 \$ — 12 mois.

- 89-0165** Prévention des MTS et du SIDA chez les adolescents (Colombie)
Comité Regional de Educación Sexual para América Latina y el Caribe, Bogotá. Produire un vidéo éducatif visant à sensibiliser les auditeurs à l'importance d'éviter les comportements associés à la transmission des maladies transmissibles sexuellement (MTS) et du SIDA, avec la participation de la population cible, à savoir les adolescents. 13 020 \$ — 6 mois.
- 89-0208** Les médias traditionnels (Malaisie-Inde)
Asian Mass Communication Research and Information Centre, Singapour. Compléter des recherches dans le domaine de l'efficacité d'utiliser et des médias traditionnels et des médias de masse pour communiquer des messages qui proviennent des organisations non gouvernementales et des organismes gouvernementaux engagés dans des activités environnementales. 39 650 \$ — 24 mois.
- 89-0214** Évaluation des émissions radiophoniques (Pérou)
Asociación de Comunicadores Sociales, Lima. Évaluer l'émission « Nuestra Vida » (Notre vie), qui existe depuis 5 ans et qui s'adresse avant tout aux femmes à faible revenu, afin de déterminer comment l'auditoire visé perçoit cette émission et s'en sert. 6 012 \$ — 6 mois.
- 89-0237** Diffusion des résultats de la recherche (Togo)
Association togolaise de la recherche sociologique, Lomé. Sensibiliser les différentes institutions à leur rôle potentiel dans le transfert de connaissances scientifiques et améliorer la communication entre ces institutions et leurs utilisateurs-bénéficiaires. 29 936 \$ — 6 mois.
- 89-0250** Popularisation de la science (Népal) — Phase II*
Royal Nepal Academy of Science and Technology, Katmandou. Aider les collectivités montagnardes isolées à être plus au courant de l'application de la science et de la technologie, afin qu'elles en profitent, en se servant de moyens de communication créés pour répondre aux besoins particuliers de ces collectivités. 120 072 \$ — 24 mois.
- 89-0282** Étude du public du canal 11 (Thaïlande)*
Centre for Educational Technology, Bangkok. Entreprendre une enquête sur le public du canal 11 de la télévision thaïlandaise afin d'établir
- ouvrages; et pour déterminer les textes, livres ou manuels de nature à être utilisés dans les centres d'enseignement supérieur de la région. 19 337 \$ — 15 mois.
- 89-0108** La radio des femmes (Philippines)
University of the Philippines, Los Baños. Permettre à l'Institut of Development Communication, College of Agriculture, de former 20 femmes des régions rurales à la mise sur pied de projets de radiodiffusion, et d'évaluer l'impact de ces projets sur leurs villages respectifs. 43 957 \$ — 24 mois.
- 89-0110** Série télévisée « Nord-Sud » (Canada) — Phase II
Metavidea Associates Inc., Québec. Continuer à produire la série « Nord-Sud » qui a été si bien reçue avec le CRDI comme parrain principal. 217 270 \$ — 12 mois.
- 89-0133** Promotion du semoir-ouvreur de sillons (Thaïlande)
Ministère de l'agriculture et des coopératives, en collaboration avec l'Institut asiatique de technologie (AIT), Bangkok. Faire l'introduction et la promotion du semoir-ouvreur ATTC-CRDI auprès des paysans, des fabricants de machines agricoles et du personnel de vulgarisation agricole travaillant dans le nord-est de la Thaïlande. 49 120 \$ — 12 mois.
- 89-0134** Communication en participation au développement (Philippines)
Silliman University, Dumaguete City. Permettre à la School of Communication de renforcer le programme « Silliman University Research Action Program in the Uplands » grâce à un programme systématique de planification, de mise en oeuvre et d'évaluation des activités de communication en matière de développement. 47 190 \$ — 36 mois.
- 89-0164** Communication et transfert technologique (Amérique latine)
Centro Internacional de Agricultura Tropical, Colombie. Améliorer le transfert et l'application de la recherche et des technologies agricoles aux producteurs agricoles, particulièrement aux petits paysans, contribuant ainsi à accroître la productivité, les revenus et le développement économique. 16 543 \$ — 12 mois.
- 89-0093** Programme de codition savante en Amérique latine
Centro Regional para el Fomento del Libro en América Latina y el Caribe (CERLALC), Colombie. Parrainer le lancement d'un programme de codition pour produire, diffuser et distribuer des textes, livres et manuels savants auquel participeront le CERLALC et l'Asociación de Editoriales Universitarias de América Latina y el Caribe (EULAC) et qui servira de modèle aux futurs efforts dans ce sens; pour encourager le personnel des centres d'enseignement supérieur de la région à produire des projets de recherche sur l'apiculture réalisés par l'Université avec l'aide du CRDI. 100 695 \$ — 36 mois.
- 89-0063** Amélioration de la communication entre les institutions de recherche et les services de vulgarisation (Afrique)
African Association of Science Editors, Kenya. Tenir une série d'ateliers de formation à l'intention des agents de publication et des réviseurs des instituts de recherche et des vulgarisateurs de l'Afrique australe, occidentale et orientale, atelières qui porteront sur la communication efficace des résultats de la recherche aux usagers et populations cibles. 153 495 \$ — 24 mois.
- 89-0064** Évaluation globale du film « L'eau et l'hygiène » (Philippines)
Kabalkat ng Pamiliyang Pilipino Foundation, Makati. Formuler des recommandations concernant la réalisation, la distribution et l'utilisation d'un film de promotion sanitaire et sociale fondé sur l'expérience du film du Centre « L'eau et l'hygiène » dans les Philippines. 22 408 \$ — 6 mois.
- 89-0092** Répertoire des éditeurs latine)
Centro Regional para el Fomento del Libro en América Latina y el Caribe, Colombie. Aider à accroître la collaboration, les échanges et les liens entre les éditeurs d'ouvrages savants de la région; favoriser la production d'ouvrages savants dans les centres d'études supérieures de la région en raison des nouvelles possibilités créées par l'Asociación de Editoriales Universitarias de América Latina y el Caribe (EULAC); et stimuler davantage la diffusion et l'utilisation de cette production tant dans la région qu'à l'extérieur d'elle. 19 520 \$ — 12 mois.
- 89-0093** Programme de codition savante en Amérique latine
Centro Regional para el Fomento del Libro en América Latina y el Caribe (CERLALC), Colombie. Parrainer le lancement d'un programme de codition pour produire, diffuser et distribuer des textes, livres et manuels savants auquel participeront le CERLALC et l'Asociación de Editoriales Universitarias de América Latina y el Caribe (EULAC); et stimuler davantage la diffusion et l'utilisation de cette production tant dans la région qu'à l'extérieur d'elle. 19 520 \$ — 12 mois.

Projets ayant fait l'objet d'affectation de fonds au cours de l'année budgétaire 1989-1990¹

Activités des

programmes spéciaux²

89-0095 Participation sociale des femmes (Chili)
Centro de Indagación y Expresión Cultural y Artística, Santiago.
Identifier comment les médias véhiculent, renforcent et justifient une image négative des femmes participant au développement du pays.
50 970 \$ — 24 mois, SSOC.

89-0167 Contribution des hommes antillais à la famille
University of the West Indies, Jamaïque. Permettre au Caribbean Child Development Centre d'étudier les attitudes et les comportements des hommes jamaïcains envers leurs responsabilités familiales.
67 780 \$ — 18 mois, SSOC.

89-0229 Développement rural et nutrition (Bénin)*
Université nationale du Bénin, Cotonou. Permettre à sa faculté des sciences de la santé de rechercher avec les populations les problèmes liés à l'atténuation de la sécurité alimentaire et les contraintes et opportunités relatives au développement des activités intersectorielles qui y conduiront.
147 000 \$ — 12 mois, SAAN.

89-0260 Femmes et propriété foncière (Sénégal)*
Université Cheikh Anta Diop, Dakar. Permettre à l'Institut fondamental Cheikh Anta Diop d'étudier la situation des femmes dans les régions rurales où les coutumes coexistent avec la législation de l'État et de comprendre les répercussions d'une telle situation sur le statut social de la femme en général et sur la propriété foncière en particulier.
41 040 \$ — 18 mois, SSOC.

1. L'astérisque indique que l'accord entre le CRDI et le bénéficiaire n'a peut-être pas été signé.
2. La division qui gère chacun des projets se présente ainsi : SAAN = Sciences de l'agriculture, de l'alimentation et de la nutrition; SSAN = Sciences de la santé; SSOC = Sciences sociales.

3. Les projets subventionnés conjointement avec une autre division paraissent sous le titre « Projets multidivisionnaires ».

89-0261 Femmes et droits fonciers (Chine)*

Disha, Inde, un organisme enregistré de charité. Étudier la réforme foncière effectuée en Chine au cours des 40 dernières années en regardant surtout la mesure dans laquelle les politiques de redistribution des terres adoptées après 1949 ont permis aux femmes d'acquiescer des droits fonciers.
50 680 \$ — 18 mois, SSOC.

89-0299 Ressources des paysannes (Thaïlande)*

Ministry of Agriculture and Cooperatives, Bangkok. Permettre au Farming Systems Research Institute et à la Prince of Songkla University de se servir de l'approche systémique à l'exploitation agricole pour trouver des façons d'améliorer la qualité de vie des paysannes dans le sud de la Thaïlande. Leurs besoins seront déterminés et des formules trouvées pour accroître le contrôle que les paysannes ont sur les ressources et leur accès à ces dernières.
64 470 \$ — 24 mois, SAAN.

89-0316 Sécurité alimentaire urbaine (Amérique centrale)*

International Food Policy Research Institute, E.-U. Établir des modèles opérationnels pour renforcer des efforts de développement au niveau des collectives, la formulation de politiques par les dirigeants et la planification du développement, surtout en ce qui a trait à la sécurité alimentaire, à la santé et à la nutrition des pauvres dans les villes.
126 900 \$ — 12 mois, SSAN.

89-0341 Connaissance, gestion et contrôle des ressources génétiques des graines par les femmes (Ghana)*

Université du Ghana, Legon. Étudier l'étendue des connaissances que les femmes ont des ressources génétiques des graines, la façon dont cette information est passée de génération en génération et l'effet, sur les petits agriculteurs, des brevets d'exploitation des nouvelles graines améliorées détenus par les multinationales.
43 350 \$ — 16 mois, SSOC.

89-0344 Rôle économique des femmes dans l'industrie du cacao (Nigéria)*

Economic Research, Ibadan. Déterminer les diverses contributions des femmes à la production et à la

commercialisation du cacao dans le sud-ouest du Nigéria pour proposer des mesures qui accroîtront et appuieront ces contributions et assureront que la main-d'œuvre agricole féminine en profitera.
20 140 \$ — 24 mois, SSOC.

89-1004 Appui institutionnel : Division internationale de l'AVCC (Global)
Afin de permettre à l'Association des universités et collèges du Canada (AVCC) de poursuivre ses fonctions dans le but d'accroître le rôle et la participation des universités canadiennes en matière de coopération et de développement international.
88 524 \$ — 12 mois, STG.

89-1040 Discrimination et sexes (Inde-Canada)*
National Law School of India, Bangalore, et l'Université York, Ontario. Étudier les conflits et les obstacles liés aux revendications d'égalité faites par des femmes de différentes collectivités religieuses indiennes.
55 365 \$ — 24 mois, SSOC.

Communications³

89-0003 Diffusion des améliorations aux techniques de boulangerie (Chili)
Federación Gr. Chilena de Industrias Panaderos, Santiago. Entreprendre la diffusion et le transfert des technologies améliorées aux boulangères.
30 122 \$ — 20 mois.

89-0004 Modules de formation en participation communautaire (Costa Rica)
Fundación Tecnológica de Costa Rica, Cartago. Recueillir des informations opérationnellement utiles sur les aspects sociaux et administratifs de la participation communautaire et les intégrer à une série de modules de formation sur vidéo à l'intention des organisations non gouvernementales et des collectivités cibles des projets d'introduction de technologies en Amérique latine.
90 710 \$ — 12 mois.

89-0006 Promotion de l'agriculture (Malaisie)

Universiti Pertanian Malaysia, Serdang. Diffuser aux collectivités rurales pauvres les résultats des

9. Engagements contractuels — Subventions et élaboration de projets

Le Centre s'est engagé à verser des subventions totalisant au plus \$116 097 000 au cours des quatre prochains exercices, à condition que le Parlement du Canada mette les fonds nécessaires à sa disposition et à condition que les bénéficiaires se conforment aux modalités de subvention des projets. Le Centre a également offert de façon officielle des subventions à des bénéficiaires susceptibles de les recevoir, pour un montant total de \$18 739 003; il attend l'acceptation de ces offres.

10. Chiffres comparatifs

Les chiffres de l'exercice précédent ont été reclassés afin de rendre leur présentation conforme à celle de l'exercice courant.

acquise) employée pour financer la recherche sur cette maladie dans le Tiers-Monde.

1989	1990
\$151 273	\$165 441
5 000	255 958
13 919	22 076
(4 751)	(10 000)
\$165 441	\$433 475
\$154 882	\$160 170
10 559	17 201
—	256 104
\$165 441	\$433 475
Total des fondations	
Solde à la fin de l'exercice	
Dons reçus	
Intérêts créditeurs	
Dépenses	
Solde au début de l'exercice	
John Bene	
Gouverneur	
SIDA	
Total des fondations	

6. Créditeurs et frais courus

1989	1990
\$ 7 278 920	\$ 6 983 667
1 221 879	1 390 149
3 872 897	2 930 009
\$12 373 696	\$11 303 825
Frais courus – Projets	
Prestations courues de congés	
Autres	

7. Contrats de recherche

Les contrats de recherche se rapportent à la recherche exécutée ou gérée par le Centre au nom d'autres organisations et à la V^e conférence internationale sur le SIDA, organisée par le Centre. Ces contrats sont financés par d'autres organisations internationales, l'Agence canadienne de développement international (ACDI), d'autres agences gouvernementales fédérales et par les frais d'inscription.

Les dépenses de contrats de recherche de \$9 276 881 (1989, \$4 198 988) comprennent \$2 909 740 (1989, \$2 431 480) déboursés au nom de l'ACDI. De plus, le Centre a reçu \$49 971 (1989, \$24 511) de frais d'administration de l'ACDI; ces frais sont inclus dans les intérêts sur placements et autres revenus.

Les fonds pour les contrats de recherche inclus dans le passif au montant de \$1 426 291 (1989, \$2 532 328) comprennent \$1 043 422 (1989, \$608 257) détenus pour l'ACDI.

8. Contrats de location-exploitation

Le Centre a conclu différents contrats de location pour des bureaux, du matériel et du logement pour le personnel tant au Canada que dans plusieurs autres pays. En vertu de ces contrats de location, les engagements annuels du Centre sont les suivants :

Exercice se terminant le 31 mars	
1991	1992
1992	1993
1993	1994
1994	1995
1996-Expiration	
\$ 6 142 124	5 150 099
4 805 005	4 625 239
4 545 862	12 122 893
\$37 391 222	

Loyer différé

Les gratuités ou autres avantages reliés à des contrats de location à long terme sont différés et amortis selon la méthode linéaire pendant la durée du contrat.

Coût du régime de retraite

Les employés du Centre participent au Régime de retraite de la Fonction publique fédérale administré par le gouvernement du Canada. L'employé et le Centre doivent cotiser au Régime. Ces cotisations représentent la totalité de la responsabilité du Centre et elles sont comptabilisées sur une base courante.

Impôts sur le revenu

Le Centre est exempt des impôts sur le revenu.

Conversion des devises étrangères

La conversion des devises étrangères en dollars canadiens se fait selon un taux de change moyen qui est très près du taux de change en vigueur à la date de l'opération. L'actif et le passif monétaires sont réglés selon le taux de change en vigueur à la fin de l'exercice. Les gains et les pertes réalisés lors des opérations de change sont imputés aux résultats de l'exercice courant.

3. Encaisse et dépôts à court terme

	1990	1989
Encaisse (découvert bancaire)	\$ (659 105)	\$ (179 966)
Dépôts à court terme		
Banques à charte canadiennes	11 648 255	25 114 133
Banques à charte sous contrôle étranger	2 151 598	1 962 920
Gouvernements fédéral et provinciaux	974 930	—
	<u>\$14 115 678</u>	<u>\$26 897 087</u>

4. Immobilisations

	Coût	Amortissement cumulé	Net
	1990	1990	1989
Matériel informatique	\$ 5 424 094	\$2 402 335	\$3 021 759
Mobilier et matériel	1 742 902	1 050 189	692 713
de bureau	1 365 142	376 525	988 617
Améliorations locales	1 275 473	638 702	636 771
Véhicules	852 347	714 368	137 979
Système téléphonique	\$10 659 958	\$5 182 119	\$5 477 839
	<u>\$10 659 958</u>	<u>\$5 182 119</u>	<u>\$4 770 484</u>

L'amortissement pour l'exercice s'établit à \$1 322 278 (1989, \$995 099).

5. Fondations

En 1987, la succession du regretté John Bene a créé une fondation qui doit être consacrée à l'octroi de bourses d'études supérieures en foresterie sociale. Durant la même année, un ancien Gouverneur du Centre a établi une fondation pour la recherche appliquée ou consacrée à remplir une mission particulière. Cette année le Centre a reçu une contribution provenant de la Ve conférence internationale sur le SIDA (syndrome d'immunodéficience

Notes afférentes aux états financiers du 31 mars 1990

1. Statut et objectif

Le Centre de recherches pour le développement international est une société sans capital-actions, créée en 1970 par une loi du Parlement du Canada appelée la Loi sur le Centre de recherches pour le développement international. Le Centre a reçu une subvention annuelle du Parlement du Canada en conformité avec le Crédit 50 du ministère des Affaires extérieures, ceci pour les exercices terminés le 31 mars 1990 et le 31 mars 1989 respectivement.

Le Centre a pour objectif d'entreprendre, d'encourager, de soutenir et de poursuivre des recherches sur les problèmes des régions du monde en développement et sur les moyens d'application et d'adaptation des connaissances scientifiques et autres au progrès économique et social de ces régions.

2. Principales conventions comptables

Les états financiers ont été préparés conformément aux principes comptables généralement reconnus au Canada, en accord avec les normes comptables internationales, et traduisent les conventions suivantes :

Immobilisations

Les immobilisations sont comptabilisées au prix coûtant et sont amorties sur la durée estimative de leur utilisation. Les améliorations locatives sont amorties selon la durée de location respectifs. Les méthodes comptables et les taux annuels prévus pour l'amortissement des immobilisations sont les suivants :

Méthode		Taux (%)
Matériel informatique	Linéaire	20
Améliorations locatives	Linéaire	5-50
Mobilier et matériel de bureau	Solde dégressif	20
Véhicules	Solde dégressif	30
Système téléphonique	Linéaire	20

Comptabilisation des revenus

Les subventions du Parlement sont inscrites selon la méthode de la comptabilité d'exercice.

Les revenus tirés des contrats de recherche sont comptabilisés lorsque les dépenses afférentes sont engagées. L'excédent des revenus sur les dépenses des contrats de recherche est inclus dans le passif à court terme.

Indemnités de cessation d'emploi courues

Les employés bénéficient de certaines indemnités de cessation d'emploi calculées selon le salaire au moment de la cessation et selon les conditions d'emploi. Le passif résultant de ces indemnités est comptabilisé au fur et à mesure que les montants s'accumulent au crédit de l'employé.

État de l'avoir du Canada
pour l'exercice terminé le 31 mars 1990

1990	1989
Solde au début de l'exercice	\$ 8 571 166
Excédent des dépenses sur les revenus (revenus sur les dépenses)	9 863 423
\$ 4 025 353	\$13 888 776
Solde à la fin de l'exercice	\$13 888 776

État de l'évolution de la situation financière
pour l'exercice terminé le 31 mars 1990

1990	1989
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Activités d'exploitation

Encaisse absorbée par (provenant de) l'exploitation		
Excédent des dépenses sur les revenus		
(revenus sur les dépenses)	\$ 9 863 423	\$ (5 317 610)
Éléments ne comportant aucun mouvement		
de fonds		
Amortissement	(1 322 278)	(995 099)
Réserve pour indemnités de cessation		
d'emploi	(303 142)	(551 298)
(Perte)/gain lors de l'aliénation		
d'immobilisations	(28 508)	27 883
Amortissement du loyer différé	304 917	304 874

Variations de l'actif et du passif d'exploitation hors caisse	152 203	149 640
Débiteurs	(545 412)	421 094
Frais payés d'avance	23 464	(14 291)
Dépôts recouvrables	1 069 871	(2 952 035)
Créditeurs et frais courus	402 693	370 338
Paiement d'indemnités de cessation d'emploi	1 106 037	(1 846 631)
Contrats de recherches courus		
2 208 856	(3 871 885)	

Activités d'investissement

Acquisition d'immobilisations	2 336 333	2 349 863
Produit de l'aliénation d'immobilisations	(278 192)	(39 783)
	<u>2 058 141</u>	<u>2 310 080</u>
Diminution (augmentation) des fonds	12 781 409	(8 093 055)
	<u>26 897 087</u>	<u>18 804 032</u>
Encaisse et dépôts à court terme au début de l'exercice		
Encaisse et dépôts à court terme à la fin de l'exercice	\$14 115 678	\$26 897 087

État des résultats
pour l'exercice terminé le 31 mars 1990

	1990	1989
DÉPENSES		
Recherche en développement		
Subventions de projets	\$ 63 424 558	\$ 56 898 932
Projets du Centre	5 757 433	6 777 332
Contrats de recherche (note 7)	9 276 881	4 198 988
	<u>78 458 872</u>	<u>67 875 252</u>
Activités reliées à la recherche		
Assistance technique	13 762 411	13 330 589
Elaboration et financement de projets	6 683 451	6 382 458
Diffusion de l'information	3 045 514	2 389 558
Bibliothèque spécialisée en recherche et développement	1 765 694	1 722 497
	<u>25 257 070</u>	<u>23 825 102</u>
Soutien à la recherche opérationnelle		
Bureaux régionaux	8 728 412	7 175 783
Gestion des divisions	7 378 419	7 211 702
	<u>16 106 831</u>	<u>14 387 485</u>
Total des dépenses de recherche et de soutien	119 822 773	106 087 839
Dépenses d'administration	11 123 682	9 887 429
	<u>130 946 455</u>	<u>115 975 268</u>
REVENUS		
Subvention du Parlement du Canada	108 500 000	114 200 000
Intérêts sur placements et autres revenus	3 306 151	2 893 890
Contrats de recherche (note 7)	9 276 881	4 198 988
	<u>121 083 032</u>	<u>121 292 878</u>
EXCÉDENT DES DÉPENSES SUR LES REVENUS		
(REVENUS SUR LES DÉPENSES)	\$ 9 863 423	\$ (5 317 610)

États financiers pour l'exercice terminé le 31 mars 1990

Bilan au 31 mars 1990

	1990	1989
ACTIF		
À court terme		
Encaisse et dépôts à court terme (note 3)	\$14 115 678	\$26 897 087
Débiteurs	1 040 856	888 653
Frais payés d'avance	849 248	1 394 660
	<u>16 005 782</u>	<u>29 180 400</u>
Dépôts recouvrables	206 894	183 430
Immobilisations (note 4)	5 477 839	4 770 484
Fondations (note 5)	433 475	165 441
	<u>\$22 123 990</u>	<u>\$34 299 755</u>
PASSIF		
À court terme		
Créditeurs et frais courus (note 6)	\$11 303 825	\$12 373 696
Fonds pour les contrats de recherche (note 7)	1 426 291	2 532 328
	<u>12 730 116</u>	<u>14 906 024</u>
Indemnités de cessation d'emploi courues	2 623 128	2 722 679
Loyer différé - Siège social	2 311 918	2 616 835
Fondations (note 5)	433 475	165 441
	<u>18 098 637</u>	<u>20 410 979</u>
AVOIR		
Total du passif	4 025 353	13 888 776
Total du passif et de l'avoir	<u>\$22 123 990</u>	<u>\$34 299 755</u>

Approuvé : le Président

le Trésorier



AUDITOR GENERAL OF CANADA

VÉRIFICATEUR GÉNÉRAL DU CANADA

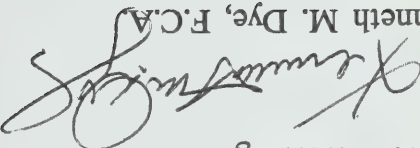
RAPPORT DU VÉRIFICATEUR

Au Centre de recherches pour le
développement international
et au
Secrétaire d'Etat aux Affaires extérieures

J'ai vérifié le bilan du Centre de recherches pour le développement international au 31 mars 1990 ainsi que les états des résultats, de l'avoir du Canada et de l'évolution de la situation financière pour l'exercice terminé à cette date. Ma vérification a été effectuée conformément aux normes de vérification généralement reconnues au Canada, en accord avec les Normes de vérification internationales, et a comporté par conséquent les sondages et autres procédés que j'ai jugés nécessaires dans les circonstances.

A mon avis, ces états financiers présentent fidèlement la situation financière du Centre au 31 mars 1990 ainsi que les résultats de son exploitation et l'évolution de sa situation financière pour l'exercice terminé à cette date selon les principes comptables généralement reconnus au Canada, en accord avec les Normes comptables internationales, appliqués de la même manière qu'au cours de l'exercice précédent.

Le vérificateur général du Canada


Kenneth M. Dye, F.C.A.

Ottawa, Canada
le 1 juin 1990

Niveau des années-personnes

1990-1991	1989-1990	1988-1989
Budget	Budget	Budget
Réalisations	Réalisations	Réalisations

DIVISIONS DE PROGRAMME

Sciences de l'agriculture, de l'alimentation et de la nutrition	47,6	48,5	48,5	50,0	44,8
Sciences sociales	44,0	48,0	43,3	48,5	43,3
Sciences de l'information	38,6	42,5	35,5	41,5	37,7
Personnel rattaché aux projets	36,4	36,5	39,4	37,5	33,5
Sciences de la santé	35,0	36,0	34,1	36,0	31,5
Communications	15,0*	26,0	24,3	25,5	22,5
Personnel rattaché aux projets	28,0*	19,0	18,3	19,0	17,4
Sciences de la terre et du génie	17,0	18,0	17,0	19,0	17,5
Bureau de planification et d'évaluation	12,0	12,0	11,3	11,0	11,4
Bourses	11,5	11,5	11,6	12,0	11,6

ADMINISTRATION GÉNÉRALE

Bureau du Trésorier	37,8	39,0	35,5	39,0	37,7
Administration	34,0	35,0	32,9	37,0	35,6
Bureau des ressources humaines	17,5	19,5	18,0	19,5	21,7
Traitement électronique des données	16,0	14,0	15,4	14,0	13,4
Bureau du Secrétaire et Conseiller juridique	15,0	17,0	16,2	15,0	16,4
Bureau de direction	14,0	15,0	13,5	18,0	14,3
Administration des bureaux régionaux	12,5	14,0	14,6	14,0	13,7
Vérification interne	5,0	5,0	4,4	5,0	3,4

DÉTACHEMENTS, CONGÉS D'ÉTUDES
OU SABBATIQUES

3,0	3,0	1,5	5,0	0,0
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TOTAL : PERSONNEL ENGAGÉ
AU SIÈGE

439,9	459,5	435,3	466,5	427,4
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* Réflète la nouvelle structure de la division.

Dépenses de recherche et de soutien pour l'exercice terminé le 31 mars 1990

	1990			1989	
	Recherche en développement	Activités relées à la recherche	Soutien à la recherche opérationnelle	Total	Total
Programmes					
Sciences de l'agriculture, de l'alimentation et de la nutrition	\$23 156 224	\$ 4 955 366	\$ 1 196 044	\$ 29 307 634	\$ 28 181 425
Sciences sociales	11 047 244	3 575 909	1 356 232	15 979 385	14 573 285
Sciences de la santé	11 156 938	2 622 993	1 139 425	14 919 356	12 700 074
Sciences de l'information	9 861 439	2 482 440	1 314 526	13 658 405	12 023 163
Sciences de la terre et du génie	7 206 912	1 311 580	614 481	9 132 973	8 941 883
Bourses	5 769 844	818 484	389 566	6 977 894	6 854 253
Activités relées aux programmes					
Bureaux régionaux	77 944	1 242 540	8 728 412	10 048 907	8 479 955
Activités des programmes spéciaux	8 886 377	914 648	0	9 801 025	5 712 180
Division des communications	1 270 467	5 022 913	969 731	7 263 111	5 824 900
Bibliothèque spécialisée en recherche en développement	0	1 765 694	0	1 765 694	1 722 497
Liaison et relations extérieures	25 472	544 503	398 414	968 389	1 074 224
	\$78 458 872	\$25 257 070	\$16 106 831	\$119 822 773	\$106 087 839

Exposé financier sur cinq ans (000 \$)

Budget 1990-1991 1989-1990 1988-1989 1987-1988 Réalisations 1986-1987 1985-1986

RÉSULTATS DES OPÉRATIONS

Revenus	\$118 700	\$121 083	\$121 293	\$112 417	\$102 401	\$ 89 663
Subvention du Parlement du Canada	114 300	108 500	114 200	108 100	100 000	86 000
Contrats de recherche	3 000	9 277	4 199	2 107	1 423	1 782
Placements et autres revenus	1 400	3 306	2 894	2 210	978	1 881
Depenses	\$119 469	\$130 946	\$115 975	\$106 401	\$100 969	\$ 91 486
Activités de recherche pour le développement*	68 684	78 459	67 875	62 362	60 382	54 585
Activités reliées à la recherche†	24 311	25 257	23 825	21 347	20 262	18 031
Aide opérationnelle à la recherche†	14 921	16 106	14 388	12 329	10 971	10 155
Administration générale	11 553	11 124	9 887	10 363	9 354	8 715
Excédent des revenus sur les dépenses (des dépenses sur les revenus)	\$ (769)	\$ (9 863)	\$ 5 318	\$ 6 016	\$ 1 432	\$ (1 823)

ACTIVITÉS DE PROGRAMME

Affectations	\$110 732	\$115 678	\$141 265	\$124 904	\$111 517	\$102 199
Nouveaux projets†	70 900	74 686	103 659	89 685	79 351	72 301
Services techniques†	13 359	13 762	13 330	12 527	11 841	11 027
Administration générale	11 553	11 124	9 887	10 363	9 354	8 715
Administration des divisions†	7 583	7 378	7 212	6 501	5 577	5 209
Bureaux régionaux	7 337	8 728	7 177	5 828	5 394	4 947
Engagements	\$112 481	\$145 089	\$126 834	\$120 154	\$105 099	\$ 95 383
Projets**	72 649	104 097	89 228	84 935	72 933	65 485
Services techniques†	13 359	13 762	13 330	12 527	11 841	11 027
Administration générale	11 553	11 124	9 887	10 363	9 354	8 715
Administration des divisions†	7 538	7 378	7 212	6 501	5 577	5 209
Bureaux régionaux	7 337	8 728	7 177	5 828	5 394	4 947
Engagements en cours	\$121 582	\$116 100	\$104 400	\$ 96 000	\$ 88 343	\$ 88 900

* Incluant les contrats de recherche.

† Les chiffres pour 1988 et les années précédentes ont été reclassés afin de rendre leur présentation conforme à celle de 1989.

‡ Incluant les projets préliminaires des divisions.

** Excluant les contrats de recherche (projets spéciaux).

Faits saillants financiers (000 \$)

Écart en pourcentage de réalisations 1988-1989 vs 1989-1990	Budget 1989-1990	1989-1990 Réalisations	Écart en pourcentage de réalisations 1988-1989 vs 1989-1990
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OPÉRATIONS FINANCIÈRES

Revenus	\$112 900	\$121 083	7,2	\$121 293	-0,2
Subvention du Parlement du Canada	108 500	108 500	0,0	114 200	-5,0
Contrats de recherche	2 200	9 277	321,7	4 199	120,9
Placements et autres revenus	2 200	3 306	50,3	2 894	14,2

Dépenses	\$123 887	\$130 946	-5,7	\$115 975	12,9
Projets en cours*	59 820	54 450	9,0	50 309	8,2
Nouveaux projets*	23 215	35 504	-52,9	28 060	26,5
Services techniques	14 037	13 762	2,0	13 330	3,2
Administration générale	11 682	11 124	4,8	9 887	12,5
Administration des divisions	7 672	7 378	3,8	7 212	2,3
Bureaux régionaux	7 461	8 728	-17,0	7 177	21,6

Excédent des revenus sur les dépenses (des dépenses sur les revenus)

\$ (10 987)	\$ (9 863)	10,2	\$ 5 318	-28,5
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ACTIVITÉS DE PROGRAMME

Affectations	\$115 852	\$115 678	0,2	\$141 265	-18,1
Nouveaux projets	75 000	74 686	0,4	103 659	-28,0
Services techniques	14 037	13 762	2,0	13 330	3,2
Administration générale	11 682	11 124	4,8	9 887	12,5
Administration des divisions	7 672	7 378	3,8	7 212	2,3
Bureaux régionaux	7 461	8 728	-17,0	7 177	21,6

Engagements	\$138 329	\$145 089	-4,9	\$126 834	14,4
Projets	97 477	104 097	-6,8	89 228	16,7
Services techniques	14 037	13 762	2,0	13 330	3,2
Administration générale	11 682	11 124	4,8	9 887	12,5
Administration des divisions	7 672	7 378	3,8	7 212	2,3
Bureaux régionaux	7 461	8 728	-17,0	7 177	21,6

*Incluant les contrats de recherche et les projets préliminaires des divisions.

lieu, avec celles contenues dans les états financiers. Pour bien s'acquitter de cette responsabilité, la direction s'appuie sur des méthodes et des systèmes de contrôle financier et gestionnel qui garantissent, d'une manière raisonnable, la fiabilité des informations financières, la protection des biens et l'efficacité d'exécution des activités. Le CRDI a un département de vérification interne dont les fonctions comprennent la révision périodique des mécanismes internes de contrôle et leur application.

Le Conseil des gouverneurs est chargé de s'assurer que la direction assume ses responsabilités en matière de communication de l'information financière et de contrôle interne. Il le fait par l'entremise du Comité des finances et de la vérification, dont les membres ne sont pas des employés du CRDI. Le comité rencontre régulièrement la direction, les vérificateurs internes et les vérificateurs externes.

Le Vérificateur général du Canada fait un examen indépendant des états financiers conformément aux normes de vérification généralement reconnues et donne son opinion sur ces états. Son examen comprend l'exécution de sondages et l'application de méthodes qui l'autorisent à faire état de la justesse de la présentation des états financiers. Le Comité des finances et de la vérification du Conseil est à l'entière disposition des vérificateurs externes.

réduction de la subvention annuelle du Centre, comme nous l'avons déjà expliqué. On prévoit qu'en 1990-1991, l'avoir du Canada en fin d'exercice sera de 3,3 millions de dollars.

Années-personnes

En 1989-1990, on comptait au Centre 435,3 années-personnes comblées par le siège social alors que le budget en prévoyait 459,5. Les vacances ont été concentrées dans le secteur du soutien technique et ont découlé du retard à combler les postes vacants. En 1990-1991, on prévoit 439,9 années-personnes comblées par le siège social.

Affectations

Les affectations totales du CRDI en 1989-1990 ont été de 115,7 millions de dollars, comparativement à 141,3 millions de dollars en 1988-1989, ce qui représente une baisse de 18,1 %. Cette somme comprend 74,7 millions de dollars affectés à de nouveaux projets, soit 64,6 % des affectations totales de l'exercice. La figure 3 montre les affectations de programme par région géographique.

En 1990-1991, les affectations totales devraient atteindre 115,9 millions de dollars. De ce montant, 75 millions de dollars, ou 64,7 %, seront réservés au programme.

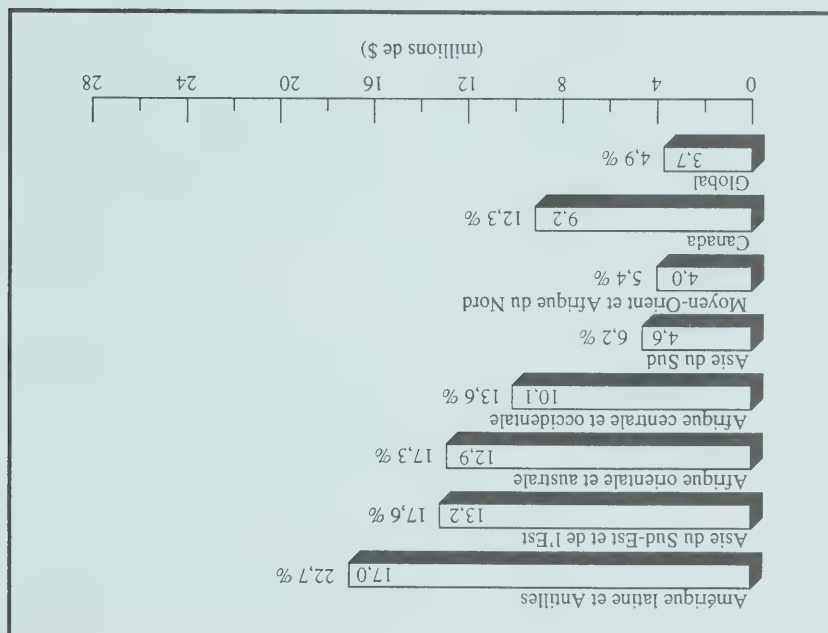


Figure 3. Affections réalisées en 1989-1990 par région.

Responsabilité en matière d'états financiers

Les états financiers ont été préparés par la direction conformément aux principes comptables généralement reconnus qui conviennent dans les circonstances. La direction assume également la responsabilité de toutes les autres informations contenues dans le rapport annuel, qui concordent, s'il y a

taille des bureaux régionaux en Égypte et en Inde. Cette catégorie de dépenses a représenté 6,6 % des dépenses totales du CRDI en 1989-1990. Des dépenses de 7,3 millions de dollars sont prévues pour les bureaux régionaux dans le budget de 1990-1991, ce qui constitue une baisse de 16 % par rapport à 1989-1990.

Administration des divisions

En 1989-1990, les dépenses au titre d'administration des divisions se sont élevées à 7,4 millions de dollars, soit une augmentation de 2,3 % par rapport à 1988-1989, et elles ont représenté 5,6 % des dépenses totales du CRDI.

Il est prévu que les dépenses à ce chapitre augmenteront de 2,7 % pour l'exercice 1990-1991 et atteindront environ 7,6 millions de dollars. La part des dépenses totales du CRDI que représente cette catégorie augmentera légèrement, passant de 5,6 % en 1989-1990 à 6,4 % en 1990-1991.

Administration générale

L'ensemble des activités du CRDI repose sur toute une gamme de fonctions en matière de politiques, de direction, d'administration et de services. Ces fonctions sont assumées par le Conseil des gouverneurs, le Bureau de direction, le Bureau du secrétaire et conseiller juridique, le Bureau du trésorier et le Bureau des ressources humaines, et, enfin, par les départements de l'administration, du traitement électronique des données et de la vérification interne.

Les dépenses au titre d'administration générale ont atteint 11,1 millions de dollars en 1989-1990, soit une augmentation de 12,5 % par rapport à l'exercice précédent. Cette augmentation touche principalement les postes «locaux», «traitements et prestations», et «dépenses de bureau et divers». La part des dépenses totales du CRDI que représente cette catégorie demeure la même qu'en 1988-1989, soit 8,5 %. Le tableau suivant présente des valeurs comparées.

	1990	1989
Traitements et prestations	\$ 6 505 670	\$ 6 117 923
Locaux	1 806 255	1 546 887
Dépenses de bureau et divers	1 185 650	867 119
Amortissement	416 267	260 525
Services professionnels et spéciaux	366 521	283 168
Réunions des gouverneurs	308 621	279 395
Déplacements et déménagements	248 310	279 704
Télécommunications	237 043	190 329
Assurances	41 281	43 338
Dépenses de groupes de travail	8 064	19 041
	\$11 123 682	\$9 887 429

Il est prévu que ces dépenses passeront à 11,5 millions de dollars en 1990-1991, soit une augmentation de 3,6 % par rapport à 1989-1990.

Avoir du Canada

L'avoir du Canada, qui avait atteint 13,9 millions de dollars à la fin de l'exercice précédent, n'était plus, tel que prévu, que de 4 millions de dollars au 31 mars 1990. Ce montant peu élevé est attribuable à l'importante

Activités de recherche au service du développement

Les activités de recherche au service du développement sont les indicateurs des coûts directs de tous les projets de recherche scientifique et technique financés par le CRDI dans les pays en développement. Elles sont la raison d'être du CRDI. Cette classification comprend le financement des projets du CRDI et des réseaux internationaux de recherche, les projets identifiés, élaborés et administrés par des chercheurs des pays en développement et les projets de recherche à contrat administrés au nom d'autres organismes subventionnaires.

En 1989-1990, les dépenses reliées aux activités de recherche au service du développement se sont élevées à 78,5 millions de dollars ou 60 % des dépenses totales du CRDI. Les dépenses pour les projets en cours, qui, pour la plupart, sont reliées à la recherche au service du développement, ont été supérieures de 8,2 % à celles de l'exercice précédent, tandis que les dépenses pour de nouveaux projets ont augmenté de 26,5 % par rapport à 1988-1989. Cette augmentation substantielle des dépenses a été prévue et a couvert les débours indiqués pour 1988-1989 mais qui ont été cédés durant l'exercice courant. Ce fait explique pourquoi l'avoir était exceptionnellement élevé à la fin de l'année précédente.

Activités reliées à la recherche

Les dépenses au titre des activités reliées à la recherche se sont élevées, en 1989-1990, à 25,2 millions de dollars ou 19,3 % des dépenses totales du CRDI. Ces activités comprennent le soutien technique, des petits projets qui permettent d'élaborer des projets de recherche et des activités ayant trait à la diffusion de l'information ou à l'application des résultats de la recherche. Cette catégorie de dépense permet également de maintenir une bibliothèque spécialisée en recherche au service du développement, qui dessert le milieu canadien du développement et le personnel du CRDI, et de mettre sur pied des activités restreintes de soutien aux programmes du CRDI.

Les dépenses au titre du soutien technique comprennent le coût du personnel de programme, dont le rôle est d'élaborer de nouveaux projets, de suivre les projets de recherche en cours et de fournir une aide technique aux bénéficiaires. En 1989-1990, les dépenses au titre du soutien technique se sont élevées à 13,7 millions de dollars ou 10,5 % des dépenses totales du CRDI, soit un peu moins élevées qu'en 1988-1989.

Pour 1990-1991, on prévoit des dépenses de 13,4 millions de dollars pour le soutien technique, soit une diminution de 2,2 % attribuable à l'annulation de plusieurs postes et à la réduction du budget des déplacements. La part que cette catégorie représente par rapport aux dépenses totales sera augmentée à 11,2 %.

Bureaux régionaux

Le CRDI continuera à soutenir les six bureaux régionaux afin de faciliter les contacts avec les bénéficiaires des subventions et de mieux répondre aux besoins du Tiers-Monde. Ces bureaux sont situés en Égypte, en Inde, au Kenya, au Sénégal, à Singapour et en Uruguay. Le coût total d'exploitation de ces bureaux en 1989-1990 a été de 8,7 millions de dollars, ce qui représente une augmentation de 21,6 % par rapport à 1988-1989. Cette importante augmentation s'explique par la décision de déménager en Uruguay le bureau qui se trouvait en Colombie, ainsi que par le coût relié à la réduction de la

2,0 millions de dollars avait été prévue au budget. Cet écart positif est attribuable aux placements et à leur rendement, plus élevés que prévu durant tout l'exercice. Quant aux revenus provenant d'autres sources, ils ont été de 0,3 million de dollars.

Les revenus des travaux de recherche à contrat se sont élevés à 9,3 millions de dollars en 1989-1990. Ce chiffre comprend la somme de 6,4 millions de dollars reçue des droits d'inscription à la V^e Conférence internationale sur le SIDA organisée par le Centre, de l'Agence canadienne de développement international (ACDI), de Santé et Bien-être social Canada et d'autres donateurs. De plus, le Centre a reçu une somme de 2,9 millions de dollars de l'ACDI pour des travaux de recherche exécutés ou administrés par le CRDI en son nom.

Pour 1990-1991, on prévoit un revenu total de 118,7 millions de dollars, soit une baisse de 2 % par rapport à 1989-1990.

Dépenses

Les dépenses totales du CRDI en 1989-1990 se sont élevées à 130,9 millions de dollars, soit une augmentation de 14,9 millions de dollars ou 12,9 % par rapport au chiffre inscrit à l'exercice précédent. La figure 2 donne le pourcentage de chaque catégorie de dépenses en 1989-1990.

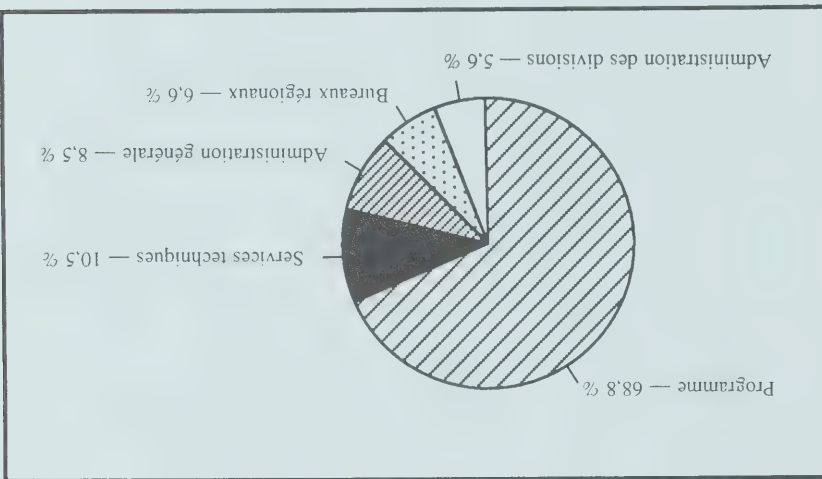


Figure 2. Ventilation des dépenses réalisées en 1989-1990.

Le tableau suivant compare les dépenses prévues (budget) pour 1990-1991 et les dépenses réelles (réalisations) en 1989-1990 et au cours des trois années précédentes (en millions de dollars).

	Budget		Réalisations		
	1990- % du	1991 total	1989- % du	1988- total	
Activités de recherche pour le développement	\$ 68,7	57,5	\$ 78,5	60,0	\$ 67,9
Activités reliées à la recherche	24,4	20,4	25,2	19,3	23,8
Administration générale	11,5	9,6	11,1	8,5	9,9
Administration des divisions	7,6	6,4	7,4	5,6	7,2
Bureaux régionaux	6,1	5,3	8,7	6,6	7,2
Total	\$ 119,5	100,0	\$ 130,9	100,0	\$ 116,0
					\$ 106,4
					\$ 101,0
					\$ 100,0

Exposé financier et faits saillants

En 1989-1990, le Centre de recherches pour le développement international a dû relever le difficile défi de réviser son budget 2 mois après le début de l'année financière et après qu'il ait été approuvé par le Conseil des gouverneurs. En mai 1989, le gouvernement fédéral a modifié le pourcentage du produit national brut (PNB) consacré à l'aide publique au développement (APD), ce qui a eu pour effet de réduire, pour la première fois, la subvention annuelle du CRDI, la faisant passer de 114,2 millions de dollars, en 1988-1989, à 108,5 millions de dollars en 1989-1990. La subvention annuelle représente toujours 3,9 % de la somme globale consacrée à l'APD pour l'exercice. La subvention du Centre a été augmentée à 114,3 millions de dollars pour l'exercice 1990-1991.

En 1989-1990, le Centre a maintenu le gel de l'effectif au siège social et a adopté une série de recommandations en matière de réduction des coûts, afin d'accroître l'efficacité et l'efficience de son exploitation. La principale recommandation qu'il a dû examiner et mettre en vigueur a eu trait à la difficile décision de réduire la taille des bureaux régionaux, au Caire et à New Delhi.

Revenu

Le revenu total du CRDI a été un peu moins élevé qu'en 1988-1989 et se chiffrait à 121,1 millions de dollars. Les revenus comprennent la subvention du Parlement de 108,5 millions de placements et d'autres sources, ainsi que des revenus de 9,3 millions de dollars de la recherche à contrat. Ce dernier chiffre comprend le coût de la Ve Conférence internationale sur le SIDA (syndrome d'immunodéficience acquise). La figure 1 montre la tendance au titre du revenu au cours des cinq dernières années.

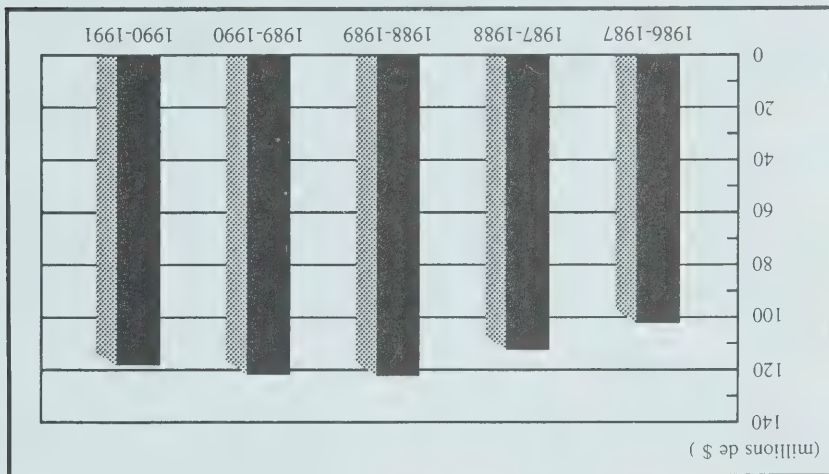


Figure 1. Revenu total du CRDI de 1986-1987 (réalisations) à 1990-1991 (budget).

La subvention du Parlement pour 1989-1990, d'un montant de 108,5 millions de dollars, a été réduite de 5,7 millions de dollars, une baisse de 5 % par rapport à l'exercice précédent. La somme de 3,3 millions de dollars provenant de placements et d'autres sources de revenu en 1989-1990 a dépassé l'objectif budgétaire prévu de 2,2 millions de dollars. Les revenus de placements ont totalisé 3,0 millions de dollars, alors qu'une somme de

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Antoine Hawara	Trésorier
Geoffrey C. Hawlin	Directeur, Sciences de l'agriculture, de l'alimentation et de la nutrition
David Nosibakken	Directeur, Communications
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Martha B. Stone	Directrice, Sciences de l'information
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Fawzy Kishk	Moyen-Orient et Afrique du Nord (Le Caire)
Vijay G. Pande	Asie du Sud (New Delhi)
Pierre Sané	Afrique centrale et occidentale (Dakar)

*Jusqu'en décembre 1989, le bureau régional pour l'Amérique latine et les Antilles était situé à Bogotá, en Colombie.

Le Conseil des gouverneurs

Janet M. Wardlaw*	Présidente du Conseil des gouverneurs	Guelph (Canada)
Peter A. Larkin*	Vice-président du Conseil des gouverneurs	Vancouver (Canada)
Ivan L. Head*	Président du Centre	Ottawa (Canada)
Anne-Claude Bernard-Bonnin*	Ouiremomi (Canada)	Albert J. Butros*
Amman (Jordanie)	Gelia T. Castillo*	Laguna (Philippines)
Margaret Calley-Carlson	Hull (Canada)	(Démission le 28 juillet 1989)
Umberto P. Colombo	Rome (Italie)	Norman T. Currie
Toronto (Canada)	(Fin du mandat le 18 avril 1989)	William Demas
Port of Spain (Trinité-et-Tobago)	(Démission le 2 février 1990)	Joan Foley
Toronto (Canada)	Gerald K. Helleiner*	Walter J. Kamba*
Harare (Zimbabwe)	Francis Keppel	Cambodge (E.-U.)
(Décedé le 19 février 1990)	Alexander A. MacDonald*	Antigonish (Canada)
Lucille Mair	Kingsston (Jamaïque)	Marcel Massé
Hull (Canada)	Robert C. McGinnis*	Winnipeg (Canada)
*Comité de direction		
M.G.K. Menon	New Delhi (Inde)	Sadako Ogata
Tokyo (Japon)	Jean-Guy Paquet*	Québec (Canada)
Marie-Josée Pinard*	Montréal (Canada)	Sir Kenneth L. Stuart
Barbade	(Fin du mandat le 18 avril 1989)	Xi Hui Da
Beijing (République populaire de Chine)	Clara Zomer*	San José (Costa Rica)

Canada

Par le biais des mécanismes de coopération établis par le CRDI, la division contribue également à la création de liens entre les chercheurs canadiens et ceux du Tiers-Monde.

C'est ainsi qu'elle subventionne un projet placé sous la direction du Dene Cultural Institute qui permettra d'établir des liens entre divers groupes travaillant à recueillir l'histoire orale dans le domaine de l'environnement. Lors d'un atelier, des chercheurs d'énés et inuit du Canada rencontreront des chercheurs venant de pays du Sahel et des îles Salomon.

La section Rôle des sexes et développement continue d'accorder beaucoup d'importance à la formation en analyse du rôle des sexes, tant au

Canada que dans les pays en développement. Elle subventionne actuellement l'institut de cours d'été sur le rôle des sexes et le développement, à la Saint Mary's University et à l'Université Dalhousie, à Halifax, et l'atelier Femmes et développement, à l'Université Laval.

Elle subventionne des projets visant à établir des liens entre l'éducation et la recherche de solutions permanentes aux problèmes de santé. En Thaïlande, la recherche en éducation sanitaire auprès des groupes marginaux tentera de réduire l'incidence élevée de la diarrhée chronique et de la malnutrition (*Programme intégré d'intervention sanitaire pour lutter contre la diarrhée de l'enfant et Nutrition communautaire intégrée*). D'autres projets cherchent à accroître les capacités de recherche, qu'il s'agisse d'examiner les problèmes en ce qui concerne la survie de l'enfant en Inde (*Réseau sur le développement humain et les études familiales*) ou d'utiliser les données démographiques pour la planification locale et la planification des naissances en Indonésie (*Renforcement de la capacité de recherche démographique*).

Deux projets ayant trait à l'environnement, l'un dans les Philippines (*Solutions de échange au cyanoure dans l'industrie des poissons d'aquarium*) et l'autre (*Emploi hors ferme dans les montagnes*) visant à déterminer les possibilités d'emploi à long terme dans l'Himalaya, au Népal, font converger les efforts vers l'augmentation des revenus au niveau local par des méthodes qui respectent l'environnement. Un autre projet a pour but de trouver des façons de faire en sorte que les avantages qui seront tirés de l'expansion du parc entourant le mont Everest profitent, en partie, à ceux qui habitent actuellement la région qui sera protégée et en utilisent les ressources (*Conservation (Chine-Népal)*).

La division subventionne également des projets examinant diverses modalités de soutien et de gestion du secteur urbain non structuré, en Thaïlande et à Sri Lanka, et d'autres portant sur la construction anarchique de logements, en Inde, et sur les problèmes causés par les inégalités observées en matière de développement régional dans les pays membres de l'ANASE (Association des nations de l'Asie du Sud-Est) et en Chine.

Un projet exécuté en Chine examine l'accès des femmes à la terre dans une perspective à la fois historique et contemporaine. Se concentrant sur les politiques de la réforme agraire de 1948, le projet permettra d'étudier l'élimination de l'oppression des femmes, ainsi que les effets de la réforme sur les relations familiales et le « travail des femmes », et il évaluera dans quelle mesure l'égalité juridique en matière de droits fonciers est susceptible de saper l'idéologie patriarcale et les structures familiales séculaires.

rechange et des formules innovatrices en vue d'accroître la pertinence de l'éducation pour le marché du travail.

Grâce à un projet régional, *Gestion des recettes d'exportation*, des institutions de recherche de trois pays exportateurs de minéraux dans la région des Andes pourront définir les principales façons dont l'instabilité des recettes se répercute sur l'économie intérieure et proposer des moyens d'en atténuer les effets négatifs. Quant à la deuxième phase du projet *Repenser la ville latino-américaine*, elle permettra de faire la synthèse des recherches urbaines qui sont effectuées actuellement en Amérique latine et de proposer diverses politiques exposant des façons, pour les gouvernements et les organismes internationaux, de s'attaquer plus efficacement aux problèmes urbains en Amérique latine et ce, en mettant l'accent sur des manières innovatrices et efficaces d'améliorer les conditions de vie dans les villes, en particulier pour les pauvres.

Les méthodes admises pour le calcul des comptes nationaux ne tiennent pas compte de l'épuisement des ressources et peuvent donc exagérer les profits tirés des récoltes. Un projet innovateur, *Reforme des comptes des revenus nationaux dans le secteur des pêches*, au Costa Rica, a pour objet la mise au point d'une méthode qui permettra de tenir compte de la diminution (ou peut-être de l'augmentation) des ressources halieutiques.

Un projet en cours d'exécution au Chili (*Participation sociale des femmes*) examine l'image de la femme véhiculée par la télévision. Il s'attardera tout d'abord à cerner le rôle que joue la télévision lorsqu'il s'agit de légitimer et de renforcer les images négatives à l'égard de la participation des femmes au processus du développement, puis il examinera comment ce médium peut contribuer à accroître le niveau de vie et la participation sociale des femmes.

Asie

L'Asie est une région géographique extrêmement diversifiée, qui comprend à la fois les Samoa occidentales, avec leurs 200 000 habitants, et la Chine, avec le quart de la population mondiale, Singapour, où l'économie est axée sur la haute technologie, et la Papouasie-Nouvelle-Guinée, où l'économie de subsistance côtoie une économie de marché rudimentaire. Elle a cependant en commun avec les autres régions une croissance démographique rapide à laquelle s'ajoutent des pressions de plus en plus fortes en vue de la croissance économique, ce qui entraîne toute une série de problèmes :

inégalité des revenus, malnutrition chronique, chômage croissant et services de santé et d'éducation peu accessibles. Le taux de croissance industrielle n'y est pas suffisant compte tenu de la population, et un fort pourcentage de cette dernière ne peut contribuer à la croissance nationale. Le développement y est toujours entravé par des problèmes de santé, surtout ceux qui sont reliés à la prolifération des regroupements de squatters en milieu urbain, conséquence de la croissance effrénée des villes dans la région. On y est de plus en plus conscient du fait qu'en négligeant l'environnement, on détruit un capital « ressources » qui est indispensable à toute tentative de développement durable. La division y concentre ses activités dans les pays à plus faible revenu.



une croissance rapide n'en sont que quelques exemples. Plusieurs des pays d'Afrique étant parmi les plus pauvres du monde, ils ont une infrastructure de recherche très faible — et parfois même inexistante. La division met donc davantage l'accent sur l'élaboration et le perfectionnement de formules d'un bon rapport coût-efficacité pour l'exécution de la recherche. Ainsi en est-il du projet *Petites bourses de recherche*, subventionné conjointement par la Fondation Ford, qui permet à l'Organization for Social Science Research in Eastern Africa d'augmenter le nombre de spécialistes en sciences sociales dans la région en offrant de petites bourses pour la formation et la recherche.

La division appuie déjà ou compte appuyer quatre importants réseaux de recherche en Afrique de l'Ouest sur les migrations, les grossesses chez les adolescentes, la qualité de l'éducation (*Réseau de recherche en éducation de l'Afrique occidentale et centrale*) et la mortalité maternelle, dans le but de cerner les problèmes graves et de recommander des politiques et pratiques plus appropriées pour l'avenir.

Grâce à l'aide accordée aux *Réseaux d'études sur la politique technologique*, en Afrique australe et orientale ainsi qu'en Afrique occidentale, des économistes, des ingénieurs, des avocats et des sociologues qui font des recherches en matière de politiques s'unissent à des auteurs de politiques pour produire de l'information qui servira à l'évaluation des politiques technologiques actuelles et pour concevoir et appliquer de nouvelles politiques visant à mettre la technologie au service du développement.

La division appuie deux projets en milieu urbain en Afrique du Sud (*Conditions de vie dans les auberges de travailleurs immigrés au Cap et Main-d'oeuvre itinérante*), ainsi qu'un vaste réseau sur les questions touchant l'administration locale au Zimbabwe et en Afrique du Sud (*Questions relevant des administrations locales*). La planification urbaine et l'administration publique y seront examinées et comparées dans le but d'appuyer la transition à l'après-apartheid.

Un projet a pour objet de préparer la mise sur pied d'un réseau s'attachant aux répercussions des réformes économiques sur l'environnement en Afrique subsaharienne. D'autres projets cherchent à déterminer comment les travailleurs agricoles qui sont touchés par l'utilisation excessive des pesticides en perçoivent les effets (*Dumping interdit ici : contrôle des pesticides dans les pays en développement*), ou encore les possibilités de formules de rechange, en matière de dispositions

financières et de régimes fonciers, qui permettraient de renverser la tendance à la désertification causée par le surpâturage dans les steppes du Maghreb, soit en Algérie, au Maroc et en Tunisie (*Systèmes pastoraux maghrébins*). Ces projets reflètent tous une même tendance en ce qui a trait aux projets relatifs à l'environnement en Afrique, en ce sens qu'ils sont exécutés, du moins en partie, par des ONG et non pas uniquement par des universités ou des gouvernements.

Un peu partout en Afrique, la division subventionne des projets ayant pour objet d'examiner l'accès des femmes à la terre, et notamment les obstacles qui, sur le plan juridique, empêchent leur accès à la propriété foncière. Des recherches à ce sujet sont en cours au Ghana, au Nigéria, au Sénégal et en Tanzanie.

Amérique latine et les Antilles

Dans cette région, la recherche au service du développement s'effectue sur fond de croissance démographique élevée et de crise économique et financière, caractérisée par une dette extérieure paralysante qui entraîne un transfert net des ressources vers les pays industrialisés. Ce sont les couches les plus pauvres de la population qui sont les plus touchées lorsque les dépenses gouvernementales, en éducation et en santé par exemple, sont réduites. Comme cette région est la plus urbanisée du Tiers-Monde, la pauvreté urbaine y représente un problème particulièrement grave. L'inflation, les taux élevés et sans cesse croissants de chômage, la dégradation de l'environnement et l'effet de désaffectation des efforts visant à établir des systèmes politiques pluralistes sont tous des sujets sur lesquels les chercheurs en sciences sociales peuvent se pencher. La région possède un bon réservoir d'institutions de recherche et de chercheurs compétents, et l'accent y est mis sur le renforcement de ces ressources par des projets de réseaux et de consortiums de recherche, ainsi que par des tentatives visant à établir des liens plus étroits entre la recherche et des politiques et pratiques plus efficaces.

Au Mexique, un projet cherche à en savoir plus sur les mères qui travaillent en examinant les leur santé et sur celle de leurs enfants. Un groupe de projets menés au Chili (*Égalité et démocratie en éducation*), en Colombie (*Solutions de rechange pour l'éducation non structurée des enfants d'âge préscolaire*), en République dominicaine (*Programme d'enseignement de rechange pour les diplômés du secondaire*) et en Uruguay (*Éducation et travail*) tenteront de trouver des solutions de

d'utiliser le progiciel pour des activités reliées à la gestion de la dette et à la planification des politiques.

Même si le milieu de l'information est

relativement bien organisé dans la région, une formation efficace et bien ciblée en gestion de l'information s'avère encore nécessaire. Un projet régional (*Série de formation en gestion de l'information*), exécuté avec trois centres de formation et d'information qui sont des chefs de file dans le domaine, permettra de concevoir et d'évaluer des programmes d'études et d'offrir, sur une période de trois ans, des cours sur l'analyse documentaire et l'indexage, le groupement et la présentation de l'information, et l'automatisation des bibliothèques. Cette approche locale de la formation s'avère très concluante et sera sans doute adoptée dans d'autres régions.

Sciences sociales

La Division des sciences sociales a deux

fonctions principales : appuyer la recherche sur les problèmes socio-économiques dans le monde en développement, afin de promouvoir un développement durable et équitable, et aider les autres divisions du Centre à examiner les problèmes en matière de développement selon la perspective des sciences sociales. Par ses activités, la division continue de chercher à répondre aux besoins des groupes qui sont les plus défavorisés, et dont les choix sont les plus limités, c'est-à-dire les pauvres en milieu urbain et en milieu rural, les femmes et les enfants.

Les secteurs prioritaires pour la division comprennent plusieurs des problèmes les plus urgents dans le monde : la détérioration des conditions de croissance économique et les inégalités de plus en plus marquées dans la répartition des richesses; la baisse de plus en plus généralisée, tant quantitative que qualitative, des services d'éducation offerts aux enfants et aux adultes; la dégradation de l'environnement et l'épuisement des ressources; la croissance anarchoïque des villes; la diminution constante de la viabilité des familles, par suite des taux élevés de mortalité maternelle et infantile et de croissance démographique; et la situation particulièrement défavorisée des femmes, sur les plans de la production et de la reproduction. En appuyant des travaux de recherche sur les causes et les effets de ces problèmes, la division met l'accent sur l'amélioration des politiques et de la prise de décision, et elle cherche à encourager les individus et les collectivités à prendre davantage en main leur propre développement.



Afrique

Les chercheurs qui oeuvrent dans le domaine des sciences sociales en Afrique ont plusieurs défis à relever en cette période marquée par la crise de l'endettement et l'ajustement structurel : la dégradation de l'environnement et la gestion des ressources, les grossesses chez les adolescentes, la mortalité maternelle et infantile, les migrations, le SIDA, l'efficacité et l'efficience des services d'éducation, et la gestion de villes qui connaissent

La division compte quatre programmes : Politiques économiques; Politiques environnementales; Population, éducation et société; et Développement urbain; et une section : Rôle des sexes et développement.

une plus grande décentralisation de la planification, de la surveillance et de l'évaluation, confiant ces responsabilités aux provinces. Un système provincial d'information a été établi, mais il s'appuyait micro-ordinateur sur une approche « descendante » (partant du sommet pour aller vers la base). Un projet a maintenu pour but de promouvoir la planification et la participation au niveau local, de même que les échanges bidirectionnels d'information, et d'apporter des adaptations et améliorations appropriées au système. Un autre projet, en Inde, s'appuiera sur les centres d'information de village, qui se sont avérés un moyen efficace de transmettre de l'information sur le développement à la population vivant en milieu rural, dans le cadre d'une campagne d'alphabétisation. Le projet permettra de tester un modèle multimédia comprenant un centre d'information central, un bulletin mensuel, des unités audiovisuelles mobiles, des bases de données et des bibliothèques de prêt. La deuxième phase d'un projet régional à l'intention des vulgarisateurs — qui constituent un chaînon essentiel du système de production agricole — (*Centre d'information sur les mauvaises herbes de l'Asie du Sud-Est*) permettra la mise au point de matériel et d'outils appropriés (imprimés et sur micro-ordinateur) pouvant les aider à déterminer les espèces de mauvaises herbes et à appliquer des méthodes de gestion.

L'information est essentielle à une meilleure gestion et peut, par exemple, aider à mieux cerner les priorités qui, en matière de recherche, permettraient de répondre aux besoins des divers intervenants dans le processus de la production agricole. Un projet exécuté dans les Philippines (*Système d'information sur la gestion de la recherche agricole*) verra la mise au point d'un prototype de système intégré de gestion qui offrira une base pour la planification, la surveillance et l'évaluation de programmes régionaux de recherche et de développement dans le domaine de l'agriculture.

La dette continue d'être un important sujet de préoccupation pour les pays en développement. Avec l'aide du CRDI, le Secréariat pour les pays du Commonwealth a mis au point un projetiel d'enregistrement et de gestion de la dette (CS-DRMS), dans le cadre des services consultatifs qu'il offre aux pays du Commonwealth. L'un des objectifs à long terme, auquel le CRDI tient beaucoup, est d'offrir ce projetiel aux pays qui ne font pas partie du Commonwealth. Un projet appuiera la mise en application du CS-DRMS en Thaïlande, permettant au ministère des Finances

de développer le rural de la Thaïlande, qui prévoit indigènes. C'est le cas, par exemple, de la politique compte des connaissances et des pratiques des systèmes d'exploitation agricole et qui tiennent aux besoins des vulgarisateurs, des agriculteurs et systèmes d'information « en aval », qui répondent des résultats de la recherche et l'élaboration de d'encourager l'adaptation de techniques découlant d'information. De plus, il est important qui, à leur tour, se reflètent dans les systèmes planification et la mise en oeuvre des programmes témoignent les activités visant à décentraliser la grande participation de la collectivité, ce dont concentration des efforts au niveau local et une plus problèmes sociaux ont rendu nécessaires la une source d'information dans cette région. Les prestations des services de santé, continuent d'être comme la sécurité alimentaire, le logement et la Les questions de base reliées à la survie,

Asie

Antilles.

the West Indies y donnera suite dans la région des de *maîtrise en bibliothéconomie* à la University of priorité, et un projet visant à établir un programme futurs en matière d'information est également une les rendre aptes à répondre aux besoins actuels et collective. La formation des professionnels pour public visant à rejoindre différents segments de la lancer un programme soutenu d'éducation du réseau et un système d'information nationaux, de permettra à la Jamaïque, qui a mis au point un national est également importante, et un projet commerce et le tourisme. La coordination au niveau notamment l'agriculture, l'industrie, l'énergie, le développement et de coopération des Caraïbes, d'information préparé pour le Comité de le cadre de la stratégie du système régional dans la région et où il faut travailler en priorité dans consolider les expériences et les investissements division à cerner les domaines où il y a lieu de dans les Antilles. Elle aide le personnel de la en matière d'information appuyés par la division peu a permis d'examiner la contribution des projets d'évaluer les risques. Une évaluation terminée il y a données sur les activités sismiques passées et terre et du génie, permettra de recueillir des en collaboration avec la Division des sciences de la projet régional (*Risques sismiques*), subventionné des secousses sismiques dans certains pays, un des petites municipalités. Étant donné la fréquence capacités de planification et de prise de décisions directeurs municipaux et ce, en vue d'accroître les axé sur l'élaboration et le maintien de plans tion géographique fondé sur micro-ordinateur et l'adaptation et le transfert d'un système d'informa-

pour la préparation d'un relevé cartographique des possibilités des sols à l'échelle locale et il intégrera des données à haute résolution obtenues par télédétection avec des renseignements fournis par les agriculteurs locaux et des données sur les ententes institutionnelles en matière de gestion des ressources en eau et en sol.

L'affectation au CRM du Cameroun d'un agent de diffusion de MINISIS pour l'Afrique de l'Ouest s'est avérée une stratégie judicieuse. Durant son affectation à Yaoundé, qui doit se poursuivre jusqu'en 1991-1992, ce dernier continuera d'aider le personnel du CRM à parfaire ses compétences et d'appuyer les utilisateurs d'Afrique de l'Est (et à l'occasion d'autres régions).

Amérique latine et les Antilles

Les questions économiques et sociales demeurent très importantes en Amérique latine et dans les Antilles. Outre la nécessité d'une participation sociale accrue, l'impact des politiques de stabilisation adoptées par plusieurs gouvernements se fait sentir sur les programmes sociaux et sur les possibilités de création de revenu. Sur le front externe, la crise de la dette et les transferts nets de ressources, les effets des blocs commerciaux internationaux et la nécessité d'avoir accès à de nouvelles technologies industrielles sont tous des facteurs qui exercent des pressions supplémentaires. L'aide apportée en matière d'information ne peut résoudre ces problèmes, mais elle peut contribuer à une meilleure utilisation de ressources au demeurant fort rares. Ainsi, par exemple, un projet exécuté en Uruguay (*Service d'information sur les innovations*) permettra d'appuyer et de stimuler l'activité des agents d'innovation, surtout les petites et moyennes entreprises. La mise en place d'un service d'information sur les innovations facilitera l'échange de données et de services avec des réseaux d'information technique, commerciale et financière, des organismes oeuvrant au développement et d'autres entrepreneurs. Dans le cadre d'un autre projet (*Service d'information pour l'industrie*), en Colombie, des ingénieurs-conseils offriront des services itinérants aux petites et moyennes entreprises; ils les aideront à répondre à leurs besoins en matière d'information en consultant des bases de données locales et internationales, ainsi qu'en faisant appel à des chercheurs et à des spécialistes.

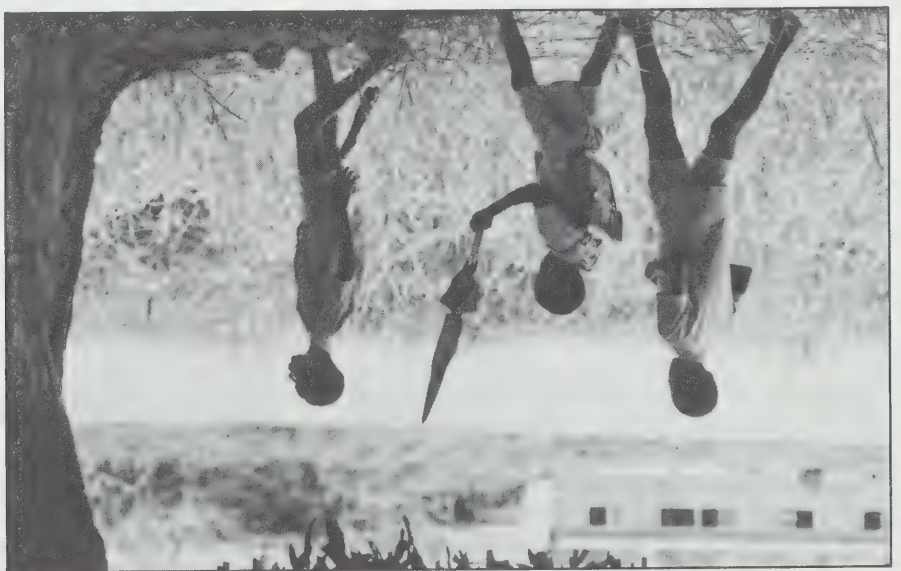
Compte tenu de la croissance des régions urbaines, un projet mené au Costa Rica (*Système d'information géographique pour les petites municipalités*) aura pour objet la conception,

promotion du commerce. De même, le projet *Centre sous-régional de documentation et d'information scientifiques et techniques* permettra d'améliorer les structures peu satisfaisantes dans le domaine de l'information scientifique et technique en Afrique centrale, par la création d'un centre d'information scientifique et technique.

S'appuyant sur une phase précédente ayant permis de renforcer un centre régional d'information sur la normalisation, un autre projet (*Réseau africain d'information sur la normalisation — phase II*) a pour but de favoriser l'essor des centres nationaux participants et la promotion de l'échange de l'information entre les membres, en partie par l'expérimentation des techniques de télématique. De fait, la nécessité d'améliorer les communications entre tous les producteurs et consommateurs d'information a suscité un projet à l'échelle du continent africain qui a pour but d'examiner et de mettre à l'essai des réseaux informatisés comportant notamment des services de télémessagerie, de téléconférence et de recherche automatisée dans des bases de données.

La division se doit de continuer à appuyer les services d'information documentaire, et c'est pourquoi elle subventionne un projet qui contribuera à la mise sur pied, au Zimbabwe, d'un réseau national de documentation et d'information en santé. Ce genre d'information ne permet cependant pas de répondre à tous les besoins, en particulier en milieu rural. Un autre projet (*Audiothèque rurale*), au Mali, permettra une plus grande participation des populations rurales à des activités d'information et d'éducation en faisant appel à des audiocassettes, de même que la transcription et la publication, sous forme de brochures, des meilleurs thèmes qui étaient auparavant transmis par la tradition orale. Dans un tout autre ordre, le projet *Système d'information sur la télématique et l'information en Afrique* permettra l'établissement, en Afrique de l'Ouest, d'un système d'information régional sur les applications locales des technologies informatiques et télématiques, étant donné le manque d'expertise adéquate, à l'heure actuelle, en Afrique.

Dans bon nombre de pays du continent, le développement rural est perçu comme étant la pierre angulaire du développement national, et il est urgent d'y effectuer un relevé adéquat des ressources agricoles et des autres ressources connexes au niveau local. La deuxième phase d'un projet exécuté au Nigéria (*Cartographie à l'échelle locale*) permettra d'étudier les résultats de travaux précédents grâce à la mise au point d'une méthode fondée sur un système d'information géographique



d'emplois constituent également des priorités. La stratégie de la division pour l'Afrique (qui a été publiée sous la forme d'une étude technique du CRDI intitulée *Partage des connaissances pour le développement — Stratégie d'information du CRDI en Afrique*), bien qu'élaborée plus précisément à l'intention de l'Afrique subsaharienne, offre un cadre de travail pertinent à l'échelle du continent. Parmi les éléments importants qu'elle met de l'avant, mentionnons la saisie et la gestion de l'information au niveau local (y compris de l'information indigène, de l'information aux fins de la gestion et de l'information sectorielle), la création d'infrastructures nationales en matière d'information, le partage des ressources (y compris l'établissement de réseaux, l'utilisation de normes appropriées et la coordination) et le développement des ressources humaines. Le secteur de concentration du CRDI sur la désertification donnera l'occasion d'appuyer des projets dans des domaines comme l'agriculture régénératrice et l'agriculture exigeant peu d'intrants sur une petite échelle, ou encore l'utilisation des technologies modernes d'information pour la surveillance et la gestion des ressources.

Le partage de l'information et l'amélioration de l'accès aux rares ressources en information ont été des thèmes importants en 1989-1990. Un projet mené en Afrique de l'Ouest (*Réseau communautaire d'information et de documentation commerciale*) cherchera à surmonter certains des obstacles actuels en matière de commerce en créant un mécanisme commun pour la collecte, le traitement et la diffusion de l'information ayant trait au commerce et en reliant un centre d'information aux membres de commerce et offices nationaux de

Afrique

L'Afrique continue de faire face aux problèmes entraînés par des changements sociaux et économiques rapides, internes et externes, et par la dégradation de l'environnement, qui rend nécessaire une gestion plus efficace des ressources naturelles. La production agricole et la création

Le Groupe des systèmes informatiques est chargé de la conception, de la maintenance et de la distribution de MINISIS (système bidirectionnel de mini-ordinateur pour le repérage de l'information), un projet pour la gestion de bases de données mis au point par le CRDI. Par l'entremise d'un petit programme, il appuie la mise sur pied de centres de ressources MINISIS (CRM) dans les pays en développement. De tels centres sont actuellement en activité en Afrique du Nord, en Afrique de l'Ouest, en Chine, en Inde et au Moyen-Orient. Compte tenu des besoins actuels et de la croissance de la collectivité des usagers, les prochains CRM seront ouverts en Amérique centrale, en Amérique du Sud et en Thaïlande. De concert avec les CRM, la division examine diverses manières d'accroître l'autonomie financière des centres et de réduire leur dépendance à l'égard du CRDI.

ressources au niveau local, et que ce problème était suivi de près par le coût et le temps requis pour l'obtention de l'information d'autres sources. La bibliothèque contribue de différentes façons à ces projets, en particulier par ses services de recherche et de fourniture de documents. Ce sont les projets exécutés en Afrique qui utilisent le plus ces services, suivis des projets en Amérique latine et aux Antilles et en Asie.

chrome hexavaient sont rejetées chaque année dans le Lac Laguna par ces industries. Si l'on entend faire de ce lac une source d'eau potable pour la population de Manille d'ici l'an 2000, il faut résoudre des maintenant le problème de contamination dont celle du chrome. Ce projet complètera fort bien les travaux entrepris dans le cadre du programme des Sciences de la terre aux Philippines, tel que décrit plus haut.

Un projet en Thaïlande concerne le design et l'adaptation d'un système de contrôle automatique par microprocesseur sur des tours manuels. Le but de ce projet est de permettre à de petites entreprises d'usinage de s'automatiser à peu de frais, de façon à améliorer leur productivité et à maintenir une qualité constante de leur production. Le coût de l'équipement et de son installation est tel que l'amortissement devrait pouvoir se faire en quelques mois. Les petites entreprises pourront également entreprendre des travaux qui sont à présent hors de leur portée car ils nécessitent des machines-outils coûteuses. Il permettra de créer des emplois en Thaïlande et dans d'autres pays où la technologie serait susceptible d'être exportée.

Par ailleurs et dans le cadre de la thématique régionale de la région desservie par le bureau régional du CRDI à Singapour, la Division a subventionné un projet de construction domiciliaire rurale dans une région affectée par de nombreux typhons. Ce projet, *Habitations à loyer modique*, dans la province de Capiz aux Philippines, vise à améliorer les techniques de construction de type traditionnel des maisons en renforçant et en réaménageant les éléments des structures pour faire en sorte que ces habitations résistent aux vents violents qui les secouent. Le projet sera réalisé par une ONG locale et comportera des éléments de recherche participative ainsi qu'un programme d'autofinancement des habitations pour les populations concernées. Les retombées d'un tel projet dépassent largement la région cible et pourraient éventuellement s'appliquer à d'autres régions et pays affectés par ces désastres naturels.

Sciences de l'information

L'information est une ressource importante pour le développement et les programmes de la Division des sciences de l'information ont pour but d'offrir cette ressource aux praticiens du développement à divers points dans la chaîne de l'information, qui va des chercheurs aux bénéficiaires de la recherche. La division cherche toujours à atteindre trois objectifs principaux :

- créer des capacités indigènes dans les pays en

développement pour la gestion et l'application efficaces de l'information;

- améliorer les systèmes, services et outils servant à la gestion et à l'utilisation de l'information pertinente à la recherche au service du développement et au changement; et
- favoriser la collaboration, ainsi que la coordination de la recherche au service du développement, en encourageant le partage de l'information, notamment par le renforcement de réseaux.

L'élaboration des projets au sein de la division témoigne de la nécessité, pour différents utilisateurs, d'avoir accès à toute une gamme d'informations pertinentes et à jour. La division est également respectueuse des priorités géographiques mises de l'avant par les bureaux régionaux et exprime dans les secteurs de concentration des régions, car elles constituent un important mécanisme pour favoriser la convergence des activités de programme du CRDI. L'axe géographique permet aussi d'examiner certains facteurs comme l'urgence des problèmes environnementaux, les répercussions et avantages éventuels, les possibilités de réussite compte tenu de l'infrastructure existante, la possibilité d'un effet multiplicateur dans la région et la collaboration Sud-Sud.

Même si la division ne peut couvrir tous les sujets ni tous les types d'information, elle investit dans des projets pilotes visant à démontrer la valeur de la mise en application des techniques et technologies des sciences de l'information pour la résolution de problèmes concrets en gestion de l'information aux fins de la recherche et de la planification. Elle met de plus en plus l'accent sur des applications autres que les applications documentaires (les données numériques et factuelles, par exemple). En outre, la division cherche à rejoindre plus directement les bénéficiaires visés par la recherche en diffusant de l'information, que ce soit au niveau des vulgarisateurs eux-mêmes, des ONG communautaires ou des centres d'information de village.

La division compte aussi deux importantes activités internes qui profitent directement aux institutions de recherche et d'information des pays en développement, à savoir la bibliothèque du CRDI et le Groupe des systèmes informatiques. Une enquête menée récemment par la bibliothèque auprès des projets subventionnés actuellement par le CRDI a démontré que le problème qui revenait le plus souvent en matière d'obtention de l'information était l'absence de

détermination des risques qui tiennent compte de la vulnérabilité physique et humaine relative à chacune des sous-régions. Ce projet élaboré de concert avec la Division des sciences de l'information s'échelonnait sur une période de cinq années. Il contribuait aux efforts déployés tout au long de la Décennie internationale pour la prévention des catastrophes naturelles décrite par les Nations Unies.

Toujours dans la lutte contre les désastres naturels, le projet *Habitations à l'épreuve des cyclones* s'attaque au problème des cyclones qui causent occasionnellement beaucoup de pertes en vies humaines et de dommages aux logements des pauvres dans la région des Caraïbes. Le projet vise à améliorer les méthodes traditionnelles de construction et élaborer des devis appropriés et acceptables pour l'autococonstruction par et avec la participation des communautés locales qui utiliseront les résultats de cette recherche.

Asie

Tout comme l'Afrique, l'Asie représente une région de contrastes dans laquelle on retrouve des pays mieux nantis que d'autres, une infrastructure industrielle qui diffère grandement d'un endroit à l'autre. La pauvreté, la gestion des ressources naturelles (terre, eau et forêts), la malnutrition, la sécurité alimentaire, le logement, les pressions démographiques, la détérioration des termes de l'échange, le fardeau de la dette sont autant de préoccupations qui se retrouvent à des degrés divers selon les pays concernés. Dans ce contexte, la Division des sciences de la terre et du génie a concentré ses efforts encore une fois à maximiser le potentiel industriel et technologique existant tout en créant des opportunités pour les populations les plus démunies. La recherche sur les problèmes causés par les désastres naturels aura été une composante importante des activités de la division dans cette partie du monde au cours de la dernière année. Dans le cadre du sous-programme Eau dans l'environnement, la division a élaboré un projet intitulé *Modèle de gestion de l'eau* pour la région du grand Manille aux Philippines. Les institutions de recherche impliquées dans ce projet de collaboration sont le National Hydraulique Centre de l'Université des Philippines et le Centre de recherche géotechnique de l'Université McGill. La recherche porte sur l'élaboration d'un modèle de gestion des ressources en eaux de la région urbaine de Manille et de ses régions périphériques qui tiendra compte de l'utilisation des eaux souterraines et des eaux de surface.

Un projet en Inde, *Mines de charbon*, vise à

localiser les cavités souterraines d'anciennes exploitations houillères à l'aide de méthodes géophysiques à la fine pointe de la technologie. Le bassin charbonnier de Raniganj situé près de Calcutta fut le premier établi en Inde au cours du 19^e siècle. À cette époque, l'absence de contrôle au niveau de l'exploitation du charbon a engendré de sérieux problèmes qui se répèrent encore aujourd'hui sur la sécurité et la vie des mineurs et des populations avoisinantes. Ainsi, le débouchement accidentel par les mineurs sur une cavité inondée et l'affaiblissement des sols sous-jacents à ces cavités ont occasionné, au cours des années, des pertes de vie ainsi que des dommages matériels importants dont l'impact affecte surtout les populations à faible revenu. L'extrant principal du projet sera le développement d'une nouvelle méthodologie de représentation tri-dimensionnelle des cavités souterraines. C'est un défi scientifique de taille qui sera relevé par l'Institut minier, géologique et métallurgique de l'Inde en collaboration avec l'Université Laval.

Dans le domaine de la technologie industrielle adaptée à des productions locales, mentionnons le projet *Meilleures techniques de transformation de la jute de qualité inférieure et de cuirings de jute* qui a pour but d'en maximiser l'utilisation commerciale au Bangladesh. En effet, les fibres de même que les produits de jute représentent 58 % des exportations du Bangladesh. Ce secteur emploie 2,7 millions de familles à la production de la jute alors que 1,5 million de personnes travaillent à sa transformation. Les fibres de moindre qualité qui occasionnent des pertes lors de la production et de l'utilisation comptent pour 42 % de la production totale. Le projet vise à étudier certaines transformations de nature biotechnologique afin de transformer la sangle de la fibre de jute de second ordre ainsi qu'à élaborer une méthode instrumentale pour en mesurer la qualité et la souplesse. Le nouveau procédé permettra de préciser et d'accroître les méthodes de contrôle de qualité de production de la jute et ce, à un coût moindre que celui encouru par les systèmes présentement offerts aux manufacturiers. Compte tenu de l'importance de ce produit pour toute la région, les retoiements de ce projet dépassent largement le cadre du Bangladesh.

Un projet aux Philippines a trait à la lutte contre la pollution occasionnée par les effluents des industries de galvanoplastie (placage). Ce projet vise à trouver une solution au problème que pose la contamination par le chrome, en mettant au point des techniques économiques permettant de réduire la quantité des effluents chromiques et de récupérer le chrome. À l'heure actuelle, trois tonnes de



contribution au cours de l'exercice financier 1989-1990.

L'approvisionnement en eau de México, l'une des plus grandes villes du monde avec une population de 16 millions d'habitants, repose sur un aquifère dont elle soutire en moyenne 56 m³ d'eau par seconde. L'abaissement du niveau de la nappe phréatique suite à cette surexploitation provoque un affaïssissement irrégulier des sols. Cet affaïssissement ainsi que la densité de la population contribuent aux risques de contamination d'origine anthropique. *L'étude des aquifères*, dans sa deuxième phase, a pour but d'élaborer une méthode efficace de détection des polluants dans les sols, d'identifier les sites de recharge naturelle en vue de leur protection, de même que l'amélioration de la gestion de l'aquifère. L'Instituto de Geofísica de l'Universidad Nacional Autónoma de México en collaboration avec l'Université de Waterloo poursuivront les recherches afin de trouver des solutions à ces problèmes et d'assurer l'approvisionnement en eau pour une population toujours grandissante.

Le projet *Risques sismiques* est quant à lui un projet de coopération inter-régionale en sismologie appliquée, sujet brûlant dans la région de San Francisco. La recherche permettra de procéder à une évaluation des dangers potentiels résultant de manifestations sismiques grâce à la constitution d'une banque de données uniformisées sur le plan régional. Le projet produira un catalogue historique complet et un catalogue de l'instrumentation disponible. L'intensité et la fréquence des dangers sismiques seront calculées pour toute la région de l'Amérique latine et des Antilles. Il s'agit d'une première étape majeure et essentielle à la

schistes fortement sujettes à des glissements. Le projet vise à établir les paramètres géotechniques contraignant l'instabilité des massifs de façon à concevoir des méthodes de confortement curatif ou préventif assurant la sécurité des populations et des infrastructures (routes, écoles et villages). La recherche fait l'objet d'une collaboration entre l'Université Laval et l'École Hassania des travaux publics de Rabat.

Amérique latine et les Antilles

La décennie qui se termine aura été l'une des pires de l'histoire en ce qui concerne la situation socio-économique et les efforts de développement des pays de l'Amérique latine. D'aucuns ont parlé de la « décennie perdue » ou de l'échec pur et simple des économies en présence. La région est en effet confrontée à une crise financière et économique des plus alarmantes entraînant dans son sillon des conséquences sociales désastreuses pour les pays concernés. Les problèmes les plus importants sont les suivants : l'insertion des économies régionales à l'économie globale, le peu d'accès à de nouvelles technologies limitant la croissance économique et l'emploi, le problème de la dette et l'impact du transfert net des ressources vers les pays développés. Les priorités de développement concernent l'amélioration de la situation socio-économique des communautés tant urbaines que rurales, l'élaboration de technologies appropriées, la création de revenus et d'emplois pour les pauvres affluant vers les régions urbaines, lesquelles deviennent congestionnées. C'est surtout dans le cadre de l'amélioration des conditions de vie des populations urbaines que la Division des sciences de la terre et du génie aura apporté sa

l'élaboration d'une technologie qui permettra la production sur les lieux de leur utilisation de tuiles pour toitures comportant un minimum d'intrants importés. Ce faisant, le projet permettra de réduire de façon appréciable le coût de ces produits pour le consommateur, de diminuer les importations d'éléments de toiture, d'améliorer la qualité des habitations, de valoriser des matières premières locales et de créer des emplois. Le projet devrait donc permettre la production de tuiles en fibres végétales à prix modique, au niveau du village et du quartier et les résultats seront applicables à des situations similaires ailleurs en Afrique.

Quant à la région de l'Afrique orientale et australe, elle comprend treize des pays les plus pauvres au monde et sept économies à revenu moyen. Les économies varient beaucoup en importance et en performance. Ainsi, on peut généralement avancer que le sud est plus industrialisé et le nord, plus peuplé. La région comporte également une grande production minière essentiellement concentrée dans les pays voisins de l'Afrique du Sud. La grande majorité des activités sociales et économiques demeure reliée à l'agriculture. Le secteur manufacturier, là où il existe, se concentre d'abord sur l'industrie des textiles et ensuite à peu près également sur la fabrication de machinerie et sur les produits chimiques. Les marchés domestiques sont petits et l'infrastructure de transport pour acheminer les produits agricoles ou manufactures vers les marchés est plutôt faible.

Le projet *Appui au secteur minier* s'intéresse à l'exploitation artisanale coopérative d'un minéral métallique, la chromite, par les entrepreneurs et mineurs africains au Zimbabwe. Ce minéral est d'une importance capitale pour l'économie du pays. Ce projet traite de la sécurité des mineurs au travail ainsi que de l'organisation et de la planification des travaux miniers par ces artisans. La recherche participative, impliquant des mineurs organisés en coopératives, est une composante importante du projet. Ce projet sera réalisé conjointement par les

chercheurs de l'Université du Zimbabwe et l'Université de Toronto.

Le projet *Briques cuites*, quant à lui, vise à améliorer la fabrication artisanale de brique d'argile cuite à des fins de construction domiciliaire au Rwanda. En effet, l'utilisation de la brique d'argile cuite est déjà très répandue au Rwanda mais la qualité en est très variable, la mécanisation rudimentaire et le financement quasi inexistant. Le projet vise à corriger ces lacunes en optimisant l'organisation du travail et les différentes phases de production, en diminuant la consommation énergétique et en favorisant la vulgarisation et la diffusion des résultats de la recherche. Ce projet est un effort de collaboration entre l'Université nationale du Rwanda et l'Université de Sherbrooke et a été financé conjointement avec la Division des sciences sociales.

Le projet *Essences végétales*, également au Rwanda, a pour but d'établir la base scientifique et technique d'une industrie de produits chimiques d'origine naturelle. Le projet se concentre sur quatre plantes susceptibles de produire des essences commercialisables sur place et sur les marchés d'exportation. Une partie importante de la tâche des chercheurs consistera à établir un protocole de transfert technologique pour faciliter la création de petites unités de production locales génératrices d'emplois.

Le projet *Transformation du baume de cajou* représente un effort de rentabilité industrielle pour un pays fort démuní comme le Mozambique. Cette huile qui est un sous-produit obtenu en grande quantité lors de la production des noix de cajou est exportée sans transformation vers les pays industrialisés. Le projet vise à mettre au point un procédé pour obtenir, à partir de cette huile, des produits de haute valeur ajoutée ainsi que des produits de première nécessité pour le Mozambique, comme du goudron, du phénol et du combustible liquide couramment utilisé au Mozambique pour l'éclairage et la cuisson des aliments maximisant ainsi les retombées d'une industrie en pleine expansion.

Les pays du Maghreb retiennent également l'attention et un bon exemple de projets poursuivis par la division dans cette région du monde est le projet *Talus du Rif* portant sur les glissements de terrain au Maroc. En effet, les glissements de terrain dans la zone montagneuse du nord marocain constituent un obstacle majeur au développement de cette région et précocent depuis longtemps les responsables marocains. La géologie, d'une complexité particulière, est caractérisée par des formations dominantes de flysch, marnes, argiles et



La deuxième phase du projet *Hydrogéologie*

quaternaire, au Bénin, a pour but une meilleure

connaissance des conditions hydrodynamiques des

systèmes aquifères du bassin sédimentaire côtier

sud-béninois en vue de leur exploitation optimale

ainsi que de la mise en place d'un système de

surveillance de la migration du biseau salé. Les

forages dans ce bassin fournissent déjà 11 millions

de m³ d'eau par an à la ville de Cotonou et sa

région. La demande croissante risque de provoquer

l'intrusion d'un biseau salé et l'infiltration d'eau

saumâtre par le toit de l'aquifère. Les cordons

littoraux exploités par les populations rurales à

l'aide de puits peu profonds sont aussi menacés par

l'intrusion saline et par des polluants d'origine

anthropique. La situation sanitaire dans cette zone

s'avère particulièrement critique et les maladies

d'origine hydrique sévissent de façon endémique.

Le projet déterminera donc la qualité chimique et

microbiologique des eaux souterraines et installera

un réseau de surveillance du biseau salé. Ce projet

sera réalisé par l'Université nationale du Bénin en

collaboration avec l'Université Laval et

l'Université de Dakar représentant en plus d'une

collaboration canadienne un effort de collaboration

sud-sud non négligeable.

Le projet *Huiles végétales non alimentaires*,

au Burkina Faso, vise à remplacer les huiles

comestibles par ces dernières et ce, pour de

nombreux usages permettant de libérer une

importante source nutritive et de contribuer au

développement de différents artisans locaux.

En Côte d'Ivoire, le projet *Tuiles en fibres*

végétales s'inscrit dans le volet de valorisation des

matières premières locales et a pour objet

et les solutions aux problèmes de développement ne

sauraient être homogènes non plus. Ainsi, à la fin

des années 80, les pays d'Afrique centrale et occi-

dentale sont encore aux prises avec des problèmes

déoulant des processus rapides et non contrôlés

qui accompagnent les changements sociaux, tant

internes qu'externes. D'une manière générale, on

peut identifier ces préoccupations de la façon

suivante : gestion des processus et des effets de

l'intégration croissante à l'économie mondiale;

gestion des processus liés aux changements socio-

économiques internes et gestion du capital des

ressources naturelles et mesures pour remédier à la

dégradation de l'environnement. La plupart des

pays d'Afrique centrale et occidentale sont des

producteurs de produits primaires et leur taux de

croissance démographique est l'un des plus élevés

au monde. Par ailleurs, le capital des ressources

naturelles de la région est très prometteur. Cepen-

dant, et par rapport à la superficie que couvre cette

région, les travaux d'exploration et les études des

sols effectuées à ce jour ont été de fort peu d'enver-

gure et l'on ne dispose pas, dans l'ensemble,

d'informations géologiques de base. Face à ces pro-

blèmes, la Division des sciences de la terre et du

génie a concentré ses efforts sur la recherche visant

à identifier le potentiel hydrogéologique de la

région afin d'améliorer la qualité et la quantité des

ressources en eau disponibles de même qu'à favori-

ser l'émergence d'industries locales dans le but de

diversifier la structure économique de la région tout

en créant des emplois. Un autre aspect des activités

de la division a été de trouver des solutions origi-

nales aux problèmes de l'habitat par l'utilisation de

ressources locales visant à réduire l'apport

de devises étrangères pour la construction

d'habitat.

érosion des sols et instabilité des terrains en pente, troisième secteur appuie la recherche sur l'extraction et la transformation des ressources naturelles, notamment les minéraux industriels utilisés dans les pays les plus pauvres.

Le deuxième programme, celui de la Technologie au service des entreprises locales, a pour objectif de financer des recherches appliquées en vue de résoudre les problèmes de productivité, d'efficacité et de rentabilité des petites et moyennes entreprises dans le Tiers-Monde. Il couvre l'examen des options qui s'offrent pour surmonter les problèmes technologiques dans les secteurs industriels prioritaires et vise à constituer un bassin local de ressources pour la recherche afin de réaliser les objectifs nationaux de développement industriel. Les activités entreprises dans le cadre de ce programme visent la création d'emplois et l'augmentation du revenu en milieu urbain et rural. Elles ont en outre pour objectif d'avantager les consommateurs à faible revenu en favorisant la production d'articles de qualité à meilleur prix. Les secteurs industriels suivants sont privilégiés dans le cadre de ce programme : Petites industries mécaniques et métallurgiques, produits chimiques industriels, textiles et cuir.

Finallement, l'année 1989-1990 aura été la dernière année d'existence du programme de Bâtiment, matériaux et technologies de la construction qui sera éliminé suite aux compressions budgétaires de l'an dernier. Ce programme était axé sur les domaines suivants : recherche sur les matériaux de construction disponibles au niveau local afin de réduire le coût du logement, recherche d'ordre technologique (conception architecturale et conception de structures), techniques de construction, ce qui comprend la création et l'utilisation des outils et du matériel appropriés pour le bâtiment de même que l'amélioration des méthodes de construction traditionnelles. Le programme avait pour objet la recherche de l'habitat fournissant une protection en cas de catastrophes naturelles comme des séismes, des inondations, des cyclones, la technique et l'organisation favorisant l'autonomie et la recherche participative des bénéficiaires éventuels. Bien que ce programme soit désormais éliminé, certaines composantes seront reprises dans le cadre des deux programmes résiduels de la Division des sciences de la terre et du génie.

Afrique

L'Afrique n'est certes pas un continent homogène. De grandes disparités existent entre les pays

La division se prépare à appuyer prochainement des travaux de recherche à Myanmar et dans les pays d'Indochine, où le CRDI ne pouvait intervenir auparavant.

- *Caplage des eaux de pluie*, au Bangladesh, et Désinfection de l'eau d'usage domestique, en Thaïlande, cherchent tous deux à promouvoir le recours à des systèmes communautaires ou familiaux d'approvisionnement en eau ou de purification (ou les deux).

- *Pulvérisateur insecticide à dos*, en Malaisie, a pour but la mise au point d'un modèle amélioré de pulvérisateur d'insecticides pour en rendre l'utilisation plus sûre.

- *Infections aiguës des voies respiratoires*, au Népal, tente d'établir des liens entre, d'une part, la présence de ces infections chez les enfants et, d'autre part, leurs conditions de logement et leur environnement.

- *L'allaitement au sein et les mères ouvrières*, en Indonésie, examinera les pratiques et les problèmes reliés à l'encouragement et à la préservation de l'allaitement au sein en milieu de travail.

- *Facteurs socioculturels influant sur le comportement contraceptif*, également en Indonésie, évaluera, à l'aide de méthodes qualitatives et quantitatives, les facteurs qui incitent les couples à employer les moyens de contraception, à continuer d'y avoir recours ou à en cesser l'utilisation.

- *Déterminants de l'emploi et de l'efficacité des contraceptifs*, en Chine, cherchera à déterminer les facteurs qui sont reliés à l'abandon des moyens de contraception et aux grossesses non planifiées.

En raison des compressions budgétaires, les activités en Asie du Sud ont été considérablement réduites cette année.

Sciences de la terre et du génie

Au cours de l'exercice financier de 1989-1990, les activités de la Division des sciences de la terre et du génie se sont regroupées au sein de trois programmes. Le premier programme de spécialisation, celui des Sciences de la terre, comprend l'eau dans l'environnement, le génie géotechnique, l'agrogéologie et l'exploitation minière à petite échelle. Les deux premiers secteurs de recherche appliquent les principes du génie pour résoudre les problèmes environnementaux de nature géologique (tremblements de terre et volcans,

fondées sur l'industrialisation et l'agriculture à rendement élevé, ont entraîné la pollution du sol, de l'air et de l'eau par les pesticides, les fertilisants, les gaz toxiques et les métaux lourds. La région compte en outre certaines populations relativement « marginales » qui ont des besoins particuliers en matière de santé, notamment les habitants des terres hautes des Andes (dont certains travaillent dans l'industrie minière), les familles des régions côtières qui vivent de la pêche artisanale et les groupes indigènes (pour lesquels les services ne sont pas très élaborés).

Les maladies sexuellement transmissibles, y compris le SIDA, posent un problème particulier. Dans certains pays de la région, l'incidence du SIDA est parmi les plus élevées au monde. La



Asie

- *Aide et éducation — SIDA*, en République dominicaine, permettra d'étudier le comportement sexuel des personnes séropositives (porteurs de virus de l'immunodéficience humaine) et des groupes à risque en vue d'élaborer des mesures appropriées.
- *Impact sur la santé et l'état nutritionnel des familles des travailleurs des plantations*, également en République dominicaine, évaluera l'impact d'un programme intégré de développement rural sur les familles des travailleurs de plantations de canne à sucre gérées par l'État.
- *Haute altitude et travail dans les mines*, au Pérou, porte sur les problèmes de santé propres aux mineurs effectuant de pénibles travaux de fond à 4 500 m d'altitude.
- *Repas de sang chez les vecteurs*, également au Pérou, essaie de déterminer des interventions environnementales qui permettraient de réduire l'incidence tant de la fièvre jaune que du paludisme.

Aux côtés de pays qui s'industrialisent depuis déjà plusieurs décennies, on retrouve dans cette région certains des pays les plus pauvres du monde, où la nourriture, le logement et l'eau saine font défaut. Le premier groupe de pays connaît de plus en plus de problèmes dans le domaine de la santé au travail, en particulier dans les industries qui emploient des femmes. Quant au deuxième groupe de pays, il est toujours aux prises avec des problèmes environnementaux reliés à une élimination inadéquate des excréta. Les maladies parasitaires et infectieuses y sont toujours prévalentes et, dans certains cas (pour le paludisme, par exemple), connaissent une recrudescence. C'est également dans cette région que l'on retrouve un pourcentage considérable de la population mondiale et, malgré les efforts de pays comme la Chine, la population continue de s'accroître à un rythme notable, ce qui a des répercussions sur la santé et sur le développement en général. Il faut effectuer des recherches pour comprendre les comportements des individus et des collectivités à cet égard, et ainsi pouvoir élaborer de meilleures mesures en ce qui concerne l'usage des contraceptifs et la planification des naissances.

- *Prévention communautaire du paludisme*, en Tanzanie, examine les modifications que la collectivité peut apporter au milieu dans lequel elle vit pour réduire la transmission de cette maladie et ce, d'une manière sûre, durable et peu coûteuse.
- *Systèmes sanitaires péruviens*, au Lesotho, a pour but de diminuer la pollution de l'environnement par les excréta.
- *Faim saisonnière et nutrition*, au Kenya, permettra de déterminer, d'un point de vue multidisciplinaire, quels sont les membres des ménages qui sont les plus vulnérables aux effets de la faim saisonnière, ainsi que les raisons de cette vulnérabilité. Diverses stratégies d'adaptation doivent être mises au point pour remédier à ce problème.
- *Remise sur pied des facultés de sciences de la santé*, en Ouganda, a pour but d'offrir un appui à long terme à la Makerere University, pour concert avec d'autres divisions du CRDI, pour réorienter son programme d'études vers les services de santé communautaires, préparer le personnel approprié dans le domaine de la santé et renforcer un réseau régional d'établissements de santé axés sur les collectivités.
- *Utilité et coûts des soins de santé pour les ménages ruraux kenyans* permettra d'établir des profils d'utilisation et de coût des services de santé au niveau des ménages et de cerner les facteurs qui influent sur eux. Les auteurs de politiques en tireront des données sur la dépendance à l'égard des services de santé gratuits au moment où l'adoption de frais est envisagée.
- En Afrique centrale et occidentale, où les principaux problèmes ont trait au SIDA, à la désertification (qui a des répercussions sur la nutrition et sur la santé des populations nomades), au renforcement des capacités des institutions et à l'établissement de réseaux de chercheurs, les projets suivants figurent parmi ceux qui ont été subventionnés en 1989-1990 :
- *Maladies sexuellement transmissibles*, au Sénégal, permettra d'explorer les facteurs sociaux et culturels reliés aux maladies sexuellement transmissibles en vue d'une meilleure compréhension des aspects culturels de la sexualité et, espère-t-on, de la conception d'interventions appropriées.

- *Nutrition des enfants et agriculture*, au Nigéria, a pour objet d'évaluer l'impact de la modernisation de l'agriculture sur la santé et l'état nutritionnel des enfants de moins de 10 ans et de leur mère.
 - *Lutte contre l'onchocercose*, en Côte d'Ivoire, porte sur la lutte communautaire contre une importante maladie liée à l'eau qui occasionne la cécité.
 - *Sécurité alimentaire et état nutritionnel* permettra aux collectivités et aux décideurs congolais d'obtenir des données sur les personnes souffrant de malnutrition de même que sur les facteurs en cause.
 - Au Moyen-Orient, où la sécurité alimentaire et la croissance démographique constituent les principaux problèmes, la division a subventionné notamment les projets suivants :
 - « *The Family House* » : *feuilleton télévisé sur l'hygiène publique*. La recherche en matière d'information, d'éducation et de communication est essentielle à la compréhension et à la modification des comportements. C'est dans ce contexte que la division subventionne ce projet en Egypte, en collaboration avec la Division des communications, afin d'établir s'il est possible de modifier les attitudes, les opinions et les pratiques qui influent sur la santé au moyen de l'identification à des personnages et du renforcement des valeurs sociales. Des activités ultérieures porteront sur des sujets ayant une pertinence régionale particulière.
 - La deuxième phase du projet *Recherche sur les systèmes de santé dans le district de Talita*, au Pakistan, devrait entraîner une amélioration des systèmes de santé communautaires et gouvernementaux et de l'état de santé de la population. Une première phase qui a été subventionnée en 1986 a permis d'analyser la situation.
- Amérique latine et les Antilles**
- L'Amérique latine fait face à plusieurs problèmes importants, dont l'exode non planifié des campagnes vers les villes, qui occasionne la croissance rapide des centres urbains, laquelle s'accompagne de la dégradation, ou de l'absence, d'infrastructures et de services sociaux. Il en résulte une recrudescence des maladies parasitaires et infectieuses, notamment de celles qui sont dues au surpeuplement.
- Les tentatives de « développement » rapide,



d'ensemble de la division, les projets devraient s'inscrire de plus en plus précisément dans ces cadres de travail, et cela devrait être encore plus évident l'an prochain.

Afrique

La division s'inquiète surtout de la situation en Afrique subsaharienne où la dégradation de l'environnement vient s'ajouter aux difficultés économiques et constitue un problème croissant. Dans certaines parties de l'Afrique, le SIDA représente une nouvelle épidémie, qui frappe les hommes, les femmes et les enfants et a de graves répercussions sur l'économie. Mais le SIDA n'est que la plus mortelle des maladies sexuellement transmissibles, lesquelles suscitent de plus en plus d'inquiétude non seulement en Afrique mais aussi en maints autres endroits dans le monde.

Il importe de faire des efforts considérables pour comprendre la dynamique de la transmission de ces maladies, en s'attachant surtout à la sexualité et au comportement sexuel dans différents contextes culturels. C'est là une démarche essentielle si l'on veut prendre des mesures appropriées pour remédier à la situation qui prévaut actuellement.

La prévention et les soins primaires ont été délaissés en raison des difficultés économiques, et on observe une recrudescence des infections et des maladies parasitaires. La désertification croissante dans le Sahel et les migrations qui s'ensuivent ont des répercussions sur la disponibilité et la qualité de l'eau, ainsi que sur les maladies liées à l'eau. Certains pays qui tentent de s'industrialiser et de favoriser l'essor des entreprises agro-industrielles

doivent également faire face aux problèmes qu'entraînent la contamination chimique de l'environnement (par les pesticides, etc.) et l'augmentation des risques et accidents en milieu de travail.

La division s'intéresse de près à « l'initiative de Bamako », de l'Organisation mondiale de la santé, qui essaie de créer un point d'accès aux soins de santé primaires par le biais de l'autonomie, en confiant à la collectivité le contrôle de l'achat, de la distribution et de la vente des médicaments essentiels. Cette initiative a permis d'appuyer un projet d'envergure que l'on commence tout juste à mettre à exécution (bien que les fonds à cet effet aient été affectés en 1988) et qui vise l'élaboration et le renforcement d'un ensemble de systèmes de santé communautaires au Bénin, avec l'aide du personnel de l'Université du Bénin, dont les capacités pour la recherche en santé au service du développement pourront en même temps être accrues. Ce projet aura des répercussions sur d'autres pays de la région et il pourrait constituer un modèle pour les soins de santé au niveau communautaire.

Voici quelques-uns des projets pertinents qui ont été subventionnés au cours de l'année en Afrique australe et orientale, où les principaux problèmes ont trait aux maladies infectieuses et transmissibles (y compris le SIDA), à la nutrition, à l'hygiène du milieu, ainsi qu'au développement des capacités de recherche et au renforcement des institutions :

- La deuxième phase du projet *Le SIDA chez les nourissons*, en Ouganda, a pour objet l'exécution de recherches sur la transmission

membres d'une collectivité. Trois groupes d'éléments constituent la pierre angulaire des trois programmes de recherche de la division :

- Santé et collectivité (les conditions de vie des êtres humains et leur comportement),
- Systèmes de santé,
- Santé et environnement.

Ces programmes sont axés explicitement sur les collectivités et leurs habitants, ils sont interdépendants et interactifs, et forment un continuum d'activités de recherche sur la santé et les problèmes qui y sont reliés, allant des problèmes perçus par les membres des collectivités à ceux qui sont cernés par les spécialistes de la santé. Le programme Systèmes de santé relie ces différentes perceptions des problèmes en matière de santé en appuyant des recherches visant à y trouver des solutions efficaces, équitables et viables. L'aide intégrée aux institutions de recherche fait partie intégrante des trois programmes de recherche de la division.

Le champ potentiel d'activité des trois

programmes est très vaste et, par conséquent, chacun d'eux est traité avec soin, à partir de divers critères, dont les besoins locaux et nationaux, les possibilités et priorités à l'échelon régional, la répartition géographique, la cohérence et la continuité au sein du programme, les liens intersectoriels et interdivisionnaires, et le rythme auquel les résultats seront vraisemblablement mis en oeuvre. C'est en se fondant sur ces considérations que les priorités sont établies, et les choix effectués, en matière de la recherche. Les pays en développement ont des besoins considérables en ce qui concerne des problèmes comme le remboursement de la dette et l'ajustement structurel, la production primaire et les termes de l'échange, la dégradation de l'environnement, les pressions démographiques, la désertification, les déplacements des populations de réfugiés, les changements climatiques et les catastrophes naturelles, et les épidémies, notamment celle du SIDA. Bon nombre de ces problèmes sont interliés et ont des répercussions en matière de santé.

Cependant, ils ne peuvent tous être abordés directement par le biais d'activités de recherche en santé. Voici donc les principaux problèmes qui se posent dans les régions du point de vue de la santé, ainsi que des exemples de projets subventionnés par la division pour y trouver des solutions.

À mesure que les stratégies et les plans régionaux évolueront en fonction des stratégies

Sciences de la santé

La Division des sciences de la santé appuie des recherches visant l'établissement de systèmes efficaces et viables de santé communautaire qui contribuent à améliorer la santé des collectivités pauvres et à accroître leur bien-être. Ses programmes de recherche découlent d'un modèle holistique de l'écologie de la santé, regroupant les nombreux éléments qui influent sur la santé des

domaine des pêches.

L'amélioration de la recherche internationale dans le domaine des pêches.

L'amélioration de la recherche internationale, de même qu'aux discussions sur consultatif pour la recherche agricole internationale, de même qu'aux discussions sur la recherche en foresterie dans le mandat du Groupe aux démarches en cours en vue d'intégrer la recherche en foresterie dans le mandat du Groupe

La division participe également activement aux démarches en cours en vue d'intégrer la recherche en foresterie dans le mandat du Groupe consultatif pour la recherche agricole internationale, de même qu'aux discussions sur l'amélioration de la recherche internationale dans le

haute importance.

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division a fait circuler un document qui propose une approche innovatrice pour réduire les risques liés à l'utilisation des pesticides dans les pays où les pouvoirs réglementaires sont insuffisants. Ce document décrit le rôle que jouerait un « vérificateur externe des risques » lorsqu'il s'agit d'attester qu'une industrie se conforme aux normes acceptées en matière de protection de la santé et de l'environnement, un peu comme le fait un vérificateur financier en ce qui concerne les principes comptables. Diverses options pour la mise sur pied et l'exploitation d'un « service de vérification des risques » y sont exposées. Plus de 130 exemplaires de ce document ont été distribués à des représentants de l'industrie, à des organismes de réglementation des pays en développement, à des chercheurs s'intéressant aux problèmes reliés aux pesticides, ainsi qu'à un certain nombre d'ONG. Les réactions ont été très favorables, et la division a l'intention d'organiser un atelier vers le milieu de l'an prochain pour développer cette idée davantage.

Dans le cadre d'une deuxième activité, la division a préparé un document préliminaire sur la protection des obtentions végétales et les brevets d'obtentions végétales. Ce document, qui fait ressortir certaines des principales ramifications éventuelles d'une loi dans ce domaine, a été distribué à un groupe restreint de scientifiques et de gestionnaires de la recherche, au Canada et dans les pays en développement. La division envisage maintenant la prochaine étape, tant à la lumière des réactions qui lui sont parvenues que des importants progrès effectués récemment dans ce domaine. Elle estime qu'elle a pour rôle de veiller à ce que les scientifiques des pays en développement participent au débat international sur cette question de la plus

paysanne, en Chine, et *Panneaux de nattes de bambou*, en Inde, s'inscrivent dans cette orientation.

L'Asie est non seulement un continent densément peuplé, c'est aussi un endroit où l'on trouve certaines des plus anciennes traditions et techniques d'utilisation et de conservation de la biomasse. En raison de la nécessité de produire, de conserver et de distribuer de la nourriture en grande quantité et d'offrir des possibilités d'emploi, le Programme des systèmes de postproduction a dû se donner plusieurs points de convergence. L'un d'eux vise l'amélioration des systèmes de manutention, de séchage et de commercialisation des céréales, dans le but d'en accroître l'efficacité, d'améliorer la qualité des céréales et de réduire les pertes. Parmi les projets subventionnés dans ce domaine, mentionnons la deuxième phase du projet *Présence d'affiaoxines dans le maïs*, dans les Philippines, et le projet *Séchior passif des récoltes*, en Indonésie. Un deuxième point de convergence porte sur la manutention et la commercialisation des fruits et des légumes comme source de revenu. C'est le cas du projet *Technologie post-récolte pour la banane*, dans les Philippines, qui a pour objet de réduire les pertes, que l'on estime actuellement à 50 % des bananes expédiées par les petits producteurs.

L'état nutritionnel des peuples d'Asie est très variable. Même s'il a atteint l'autosuffisance en ce

qui concerne la production alimentaire, le

sous-continent indien compte le plus grand nombre

de personnes souffrant de malnutrition. La

répartition et la consommation inéquitables de la

nourriture et les facteurs socioculturels sont des

déterminants clés de l'état nutritionnel dans la

région. Les jeunes femmes et les nourrissons sont

particulièrement touchés par la malnutrition. Pour

favoriser les progrès dans cet important secteur, la

division subventionne la Nutrition Foundation of

India pour l'élaboration et la mise à l'essai d'un

programme de formation destiné aux adolescentes

(projet *Education en nutrition pour jeunes femmes*). Par ailleurs, un projet institutionnel permettra

la formulation et la mise en oeuvre de programmes de nutrition dans le nord-est de la Thaïlande. Enfin, un projet de grande envergure exécuté en Chine

(*Foresterie paysanne*) comporte une composante en matière de nutrition, afin de permettre l'évaluation des répercussions des programmes de foresterie sur l'état nutritionnel et le bien-être des populations

A l'échelle mondiale

Outre les activités de programme décrites

ci-dessus, plusieurs autres activités de la division au cours de l'année sont dignes de mention. Ainsi, la

L'Asie contribuera à renforcer les capacités de recherche des programmes nationaux de la région. De même, la deuxième phase du projet *Systèmes d'alimentation des canards*, en Indonésie, vise à accroître la production de viande de bonne qualité grâce à une utilisation plus efficace des ressources alimentaires existantes dans les villages.

L'accroissement de la production halieutique constitue une autre stratégie viable pour l'augmentation de la production alimentaire. L'Asie possède d'importantes ressources halieutiques, desormais limitées, de même qu'une longue tradition dans le domaine de l'aquaculture, et c'est là que se trouvent les plus grandes possibilités. Les interventions de recherche du CRDI ont d'abord et avant tout été axées sur la compréhension des systèmes traditionnels et sur leur optimisation. La plus grande partie de l'aide est apportée dans le cadre de réseaux disciplinaires de recherche, portant sur la santé et la nutrition des poissons, la génétique aquicole et les aspects socio-économiques de l'aquaculture.

La production durable et les approches

participatives en matière de recherche et de

développement ont représenté des priorités dans la

région. Le développement et l'institutionnalisation

de la recherche sur les systèmes d'exploitation

agricole dans bon nombre de pays constitue une

importante réalisation de la division, tout comme

l'encouragement, le soutien technique et l'aide

financière apportés à la luitte phytosanitaire

intégrée. Un nouveau projet dans ce domaine,

Pesticides végétaux, sera exécuté en Thaïlande. La

diffusion des résultats de ces activités s'effectue en

grande partie au moyen de bulletins sur

l'agriculture durable, qui ont d'abord été produits

par le personnel du CRDI mais le sont désormais, et

fort bien, par des ONG.

Les systèmes cultureux constituent toujours un

important point de convergence en Asie, et la

division cherche à répondre aux besoins de deux

des plus petits pays de la région par les deuxièmes

phases des projets *Systèmes de riziculture*, au

Bhoutan, et *Légumineuses à grains*, au Népal.

La division reconnaît de plus en plus

l'importance des systèmes d'agroforesterie en Asie

lorsqu'il s'agit d'accroître la durabilité, notamment

par le biais des projets *Agroforesterie*, en Inde, et

Arbres fruitiers, en Thaïlande. Les possibilités

considérables offertes par le bambou et le rotin pour

la création de revenu et d'emplois, qui n'ont pas

fait l'objet de recherches jusqu'à maintenant,

demeurent une composante importante du

Programme de la foresterie. Les projets *Foresterie*



Asie

En bien des endroits en Asie, et surtout en Asie du Sud-Est, les problèmes se déplacent et ne touchent plus la production mais plutôt la distribution. Comme les systèmes de recherche et l'aide gouvernementale sont relativement développés dans bon nombre de pays, la division se concentre désormais davantage sur le financement de programmes conçus de manière à profiter à ceux qui ont été laissés à l'écart du processus de développement ou marginalisés. La densité de la population est l'un des principaux facteurs qui orientent l'affectation des ressources dans la région. Compte tenu des restrictions sur les terres, il importe d'accroître l'efficacité de la production et d'augmenter considérablement les possibilités d'emploi en milieu rural. Les pressions d'ordre environnemental sont extrêmement fortes dans certaines régions et il s'avère grandement nécessaire d'avoir recours à une gestion durable des ressources et à des méthodes de rechange pour la lutte phytosanitaire.

La division cherche à susciter une plus grande efficacité et à répondre aux besoins des plus pauvres en subventionnant les recherches sur les petits animaux, en particulier sur ceux qu'il est possible de nourrir à meilleur marché, et c'est pourquoi elle accorde la priorité aux recherches sur les petits ruminants. L'élevage des chèvres et des moutons exige moins de dépenses d'investissement que celui des grands ruminants, et ces animaux offrent une plus grande souplesse en ce qui a trait à leurs besoins alimentaires, ce qui les rend très précieux pour les petits agriculteurs et les paysans sans terre. *Le Réseau des petits ruminants* pour

d'attention à la mise sur pied de petites entreprises pour répondre aux besoins du marché, à la création de possibilités de revenu en milieu rural et de possibilités de bonne qualité et de produits très de pérurbain, et à l'augmentation de la disponibilité d'aliments de bonne qualité et de produits très de la biomasse. Elle a vu à la mise en place d'un réseau d'organisations non gouvernementales (ONG) ayant pour but de promouvoir les petites entreprises de transformation dans le secteur agro-industriel. Parmi les projets subventionnés dans cette veine, mentionnons la troisième phase de *Station rurale pour la transformation des aliments* et la deuxième phase de *Transformation du manioc* en Colombie, *Entreprises rurales en Amérique latine et Transformation des produits forestiers* au Pérou. Certains de ces projets, ainsi que d'autres dont le projet *Modèles et stratégies de crédit aux petits paysans*, en Colombie, et la troisième phase du projet régional *Arbres fixant l'azote*, font appel à des spécialistes en économie agricole de la région pour résoudre les problèmes des pauvres en milieu rural et élaborer des méthodes de recherche permettant d'accroître l'efficacité du travail des scientifiques.

La division continue d'examiner les possibilités offertes par des plantes et des animaux qui ne sont pas suffisamment utilisés et ne font pas assez l'objet de recherches. Ainsi, le projet *Élevage de cobayes* — phase II, au Pérou, vise à accroître la production d'aliments protéiques de bonne qualité. Quant au projet *Camélics sud-américains* — phase III, également mené au Pérou, il cherche à accroître le revenu des paysans des terres hautes, qui constituent l'une des couches les plus pauvres de la population rurale en Amérique latine, grâce à l'élevage de l'alpaga.

alimentaire saisonnière et les stratégies d'adaptation. En Afrique occidentale, trois projets interrelés (*Développement rural et nutrition au Bénin, Sécurité alimentaire et état nutritionnel au Congo et Nutrition des enfants et agriculture au Nigéria*) examinent les questions reliées à la sécurité alimentaire des collectivités, aux effets de l'évolution de l'agriculture sur l'état nutritionnel, à la nutrition des nourrissons et des enfants, et aux répercussions des politiques d'ajustement structurel dans le domaine de la nutrition. Une aide accrue est accordée aux scientifiques qui oeuvrent directement auprès des intervenants des systèmes de production et d'utilisation des ressources naturelles renouvelables. Ainsi, la division contribue à une meilleure compréhension des systèmes dans leur ensemble et permet aux chercheurs de se concentrer sur les aspects de ces systèmes qui sont les plus susceptibles d'entraîner une augmentation durable des possibilités de revenu et d'emploi. Les projets *Système kényan de production d'huile et de protéines végétales* — phase III au Kenya, *Aide aux organisations locales et Réseau de recherche sur les systèmes d'exploitation agricole* — phase II en Afrique de l'Ouest sont tous des projets multidisciplinaires de recherche participative dans le cadre desquels les divers détenteurs d'intérêts et les bénéficiaires visés prennent part au processus de recherche alors même que l'on procède à la définition des problèmes.

Amérique latine et les Antilles

Cette région se caractérise par une population qui s'accroît rapidement, un énorme potentiel de ressources naturelles et des produits et milieux agricoles extrêmement diversifiés. C'est également une région fortement urbanisée, avec les demandes et économies de marché qui s'ensuivent. La répartition du revenu y est très asymétrique. La destruction des écosystèmes des terres basses en région humide par des méthodes de production inadéquates soulève de grandes inquiétudes.

Un important secteur de concentration de la recherche dans cette région a trait à l'amélioration des conditions des collectivités qui vivent de la pêche artisanale. Les protéines de poisson représentent un apport nutritionnel essentiel pour certaines couches de la population, et la pêche est une importante source de revenu et d'emplois, surtout dans les régions côtières. En gros, l'aide se répartit entre deux vastes réseaux régionaux : le Réseau des pêches artisanales et le Réseau régional de recherche en aquaculture pour l'Amérique latine. Dans le cadre du premier réseau, la division accorde une aide soutenue avec le projet *Développement côtier intégré* mené à l'échelle ré-

gionale. Plusieurs projets reliés au Réseau régional de recherche en aquaculture sont subventionnés, dont les suivants : *Développement régional de l'aquaculture* (Amérique latine), *Invertébrés/algues marines* (Chili) — phase III, *Production de larves marines* (Amérique latine), *Développement de la pêche* (Chili) — phase II et *Séminaire de formation sur les pêches* (Amérique latine).

Il importe de gérer avec soin toute tentative visant à étendre la superficie cultivable dans les terres basses en région tropicale humide en Amérique latine et dans les Antilles. Certains projets, comme les projets *Sylvipâturages et Arbres fixant l'azote*, au Costa Rica, ont pour but la mise au point de techniques combinant l'utilisation d'arbres et d'herbes à usages multiples de la famille des légumineuses pour améliorer la production animale tout en protégeant l'environnement. D'autres projets, tels les projets *Systèmes du piedmont de l'Amazonie*, au Pérou, et *Gestion du bassin hydrographique*, en Colombie, tentent d'explorer plus avant les possibilités d'utilisation des arbres à usages multiples et abordent les facteurs qui incitent les agriculteurs à employer les arbres d'une façon plus efficace dans leurs systèmes de gestion.

La dégradation du capital « ressources productives » dans les Andes est l'un des principaux facteurs contribuant à répandre la pauvreté et à accroître les migrations vers les grandes villes. La division cherche à remédier à ce problème par son secteur de concentration sur le développement andin, qui finance des recherches sur les systèmes d'exploitation agricole et le maintien et l'amélioration du plasma germinatif des cultures des terres hautes des Andes.

La détérioration de l'état nutritionnel, due à la récente et grave crise économique dans la région, est manifeste, et une meilleure compréhension des conditions de vie des ménages s'impose. En matière de nutrition, le CRDI s'intéresse à l'élaboration d'une méthodologie permettant de cerner les problèmes, à la surveillance nutritionnelle au niveau des ménages et à la promotion de la recherche interdisciplinaire. Il s'y emploie en intégrant des objectifs d'ordre nutritionnel aux projets de recherche agricole qu'il subventionne, ainsi qu'en appuyant certains projets, comme le projet *Impact sur la santé et l'état nutritionnel des familles des travailleurs des plantations*, en République dominicaine.

La division a également été en mesure de faire porter directement ses programmes sur la création de revenu et d'emplois et sur la satisfaction des besoins fondamentaux. Elle a accordé beaucoup

de programme spécialisée en zootechnie a été affecté au bureau régional pour l'Afrique occidentale, afin d'accroître l'aide apportée par le CRDI dans ce domaine.

Si les ressources halieutiques du continent sont substantielles, tant en mer qu'en eau douce, leur développement a été limité. La recherche a un rôle très important à jouer, mais les capacités des institutions en la matière sont en général assez faibles. L'aide à la recherche dans le domaine des pêches s'est concentrée sur deux secteurs à potentiel élevé : la pêche artisanale en eau douce dans les lacs de la Rift Valley, ainsi que dans les petits barrages et les réservoirs, et l'aquaculture, en particulier l'optimisation des systèmes traditionnels. Cette année, les nouveaux projets portent surtout sur la pêche artisanale en eau douce; c'est le cas des projets *Systèmes de pisciculture à petite échelle*, au Kenya, et *Petits barrages*, en Côte d'Ivoire.

On cherche toujours à accroître la sécurité alimentaire et la disponibilité des aliments, et à augmenter leur valeur nutritionnelle, grâce à des améliorations aux systèmes postécologie, aux petits systèmes de mouture, aux systèmes et à l'équipement de transformation des graines oléagineuses comestibles, et aux systèmes de séchage et d'entrepôtage. La deuxième phase du projet *Utilisation du soja*, à l'Institut international d'agriculture tropicale, permettra de poursuivre et d'élargir une activité de recherche et de diffusion qui réussit fort bien à promouvoir une production et une utilisation plus grandes du soja au niveau local. Le projet complémentaire *Batteuses de soja*, au Nigéria, s'attaque à un problème qui empêche une plus grande utilisation du soja. Cette approche systémique des problèmes a été élargie avec le tout nouveau projet *Sorgho/nil alimentaires et fourragers*, au Kenya. Une démarche multidisciplinaire concertée a permis de définir les systèmes prioritaires en matière de produits de base et d'aliments, de même qu'une méthodologie efficace à cet effet. Dans le cadre de plusieurs projets, des techniques d'évaluation rapide ont pu être mises à l'essai dans le but de mieux définir les problèmes des bénéficiaires et d'analyser les cadres politiques nécessaires à l'adoption de changements d'ordre technique.

La division accorde une attention particulière aux systèmes qui permettent de surveiller les effets de la détérioration de la situation économique au niveau des ménages. La Section de la nutrition contribue à un projet que mène la Division des sciences de la santé dans les régions rurales du Kenya, et qui vise à évaluer les modèles de disette

examinant la production et la durabilité des systèmes agropastoraux dans la steppe maghrébine. Ces projets permettront d'élaborer et de tester un ensemble de techniques de gestion en matière d'agronomie, de pâturages et d'élevage, pour stabiliser et améliorer les systèmes de production. De même, la division poursuit sa participation de longue date à la mise au point de techniques prometteuses dans le domaine de l'agroforesterie avec les projets *Forêt/paysanne*, au Malawi, et *Systèmes d'agroforesterie*, au Cameroun. Ces projets répondent à la nécessité d'appuyer une production agricole durable. La deuxième phase du projet *Plantations d'arbres-bois de chauffage*, au Botswana, s'attaque directement à la pénurie de plus en plus grave de bois de feu qui touche la plus grande partie du continent.

La division a également appuyé une vaste gamme d'initiatives de recherche visant à accroître la productivité; c'est là l'autre membre de l'équation de la durabilité. Le Programme des systèmes de production végétale appuie la recherche sur les éléments constitutifs d'importantes cultures de base — tubercules, sorgho, légumineuses à grains et banane — ainsi que des initiatives régionales s'accompagnant d'un partenariat direct avec des programmes nationaux, d'autres programmes et divisions du CRDI, et des organismes internationaux. La deuxième phase du *Réseau de recherche sur les tubercules alimentaires*, en Afrique orientale et australe, permettra la poursuite de programmes d'amélioration des tubercules donnant des résultats concluants et d'activités de formation, ainsi que l'établissement de certains liens fort encourageants entre des programmes nationaux forts et d'autres, plus faibles. Une autre activité similaire, soit le *Réseau de recherche sur les cultures oléagineuses*, permet de faciliter l'échange de l'information, des résultats de recherche et du plasma germinatif entre les programmes nationaux d'Afrique orientale, de même qu'entre ces programmes de recherche et ceux qui portent, en Inde et dans d'autres pays d'Asie du Sud, sur le sésame, le tournesol et les brassicacées.

La deuxième phase du projet *Trifolium et rhizobium* en Afrique subsaharienne et le projet *Sous-produits* au Nigéria cherchent à obtenir une meilleure production animale par l'amélioration des pâturages et une plus grande utilisation des sous-produits agricoles. Quant au projet *Elevage du lapin*, en Ouganda, il vise une augmentation de la production de viande de bonne qualité par les petits exploitants agricoles. En raison de l'importance de l'élevage en Afrique occidentale, un administrateur

est conçue de manière à renforcer la capacité des institutions de recherche des pays en développement d'atteindre ces objectifs.

L'aide à la recherche se répartit entre six programmes et deux sections :

- Programme des systèmes de production animale,
- Programme des systèmes de production végétale,
- Programme des pêches,
- Programme de la foresterie,
- Programme des systèmes de postproduction,
- Programme de l'économie agricole,
- Section Environnement et gestion durable des ressources,
- Section de la nutrition à l'échelle du Centre.

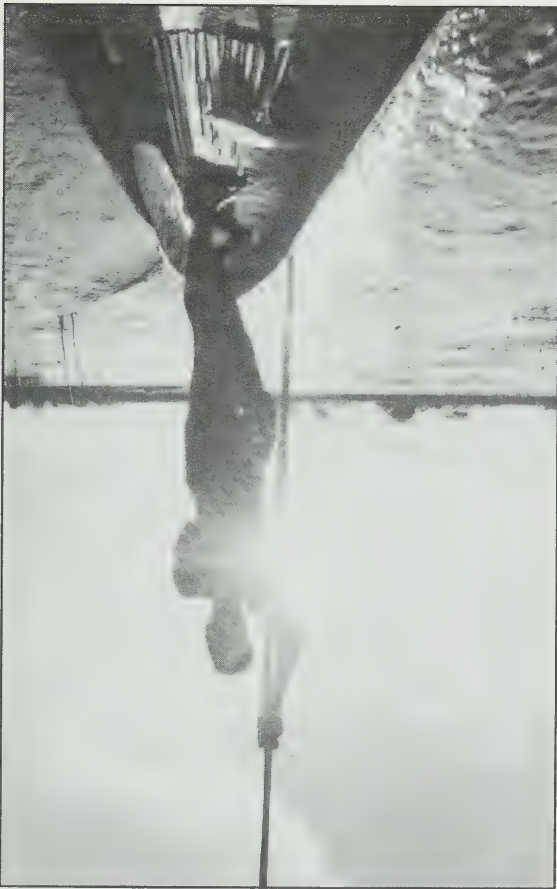
Durant l'année, la structure de la division a été quelque peu modifiée afin de la rendre plus apte à résoudre les problèmes en matière d'environnement et de nutrition. La section Environnement et gestion durable des ressources a été créée pour permettre une meilleure intégration des préoccupations d'ordre environnemental aux activités des autres programmes. La Section de la nutrition est une section à l'échelle du Centre qui relève de la division. Visuellement, les programmes peuvent être représentés sous forme de matrice : le Programme des systèmes de postproduction et le Programme de l'économie agricole, tout comme la section Environnement et gestion durable des ressources et la Section de la nutrition qui viennent d'être créés, sont en interaction avec les programmes axés sur les produits de base.

Afrique

L'agriculture constitue, et de loin, l'activité économique la plus importante en Afrique. Dans la région, la pauvreté est répandue, la famine, intermittente, et le taux de croissance démographique est le plus élevé au monde. Même si la densité de la population y est encore relativement faible (comparativement à ce qu'elle est en Asie), les pressions exercées sur les terres s'intensifient rapidement. Les systèmes traditionnels d'exploitation agricole ne sont pas en mesure de répondre à la demande accrue de nourriture. La transition vers une agriculture plus intensive entraîne de graves problèmes dans de nombreuses régions avec la fragmentation des terres à potentiel élevé et la mise en production intensive de terres marginales en dépit des risques et du faible

rendement. Dans plusieurs pays, l'infrastructure de base, sur laquelle la plupart des plans traditionnels de développement avaient été élaborés, a connu une détérioration rapide. Les termes de l'échange pour les produits de base africains se sont détériorés et l'ajustement structurel a eu des effets négatifs sur les services offerts par les gouvernements, ce qui a aggravé les problèmes, dans certains secteurs, d'institutions qui étaient déjà faibles.

La protection du capital « ressources » revêt une importance primordiale en Afrique et plusieurs projets récents de la division s'attaquent de front à ce problème. Trois projets interprogrammes-interdisciplinaires sur la dégradation des terrains de parcours nord-africains (*Systèmes pastoraux*



appuyer le développement, afin de répondre aux besoins de recherche cernés dans toutes les divisions.

Le projet régional Réseau des petits ruminants, qui est financé conjointement avec plusieurs autres divisions du CRDI, met de l'avant un plan de formation qui tient compte de l'importance que la division accorde au fait de favoriser les contacts, les échanges et la collaboration entre scientifiques et techniciens dans les institutions et organismes d'Asie du Sud et du Sud-Est. Dans le cadre de ce projet, des formateurs et des techniciens des deux régions se réunissent une fois l'an pour de brèves séances de formation portant sur des sujets précis comme, par exemple, les ressources pour l'alimentation des animaux et l'insémination artificielle. Afin de promouvoir encore davantage les interactions et les échanges, ces activités ont lieu tout à tour dans chacune des deux régions pendant toute la durée du projet (elles sont offertes, en Asie du Sud, à l'Andhra Pradesh Agricultural University et au Central Institute for Research on Goats, et, en Asie du Sud-Est, au Philippine Council for Agriculture and Resources Research and Development et à la University of Malaysia).

Le projet Formation en gestion de la recherche, en Asie du Sud-Est, est conçu et exécuté par le Research Management Center de la University of the Philippines à Los Baños. Il permettra d'offrir un encadrement stable et de calibre professionnel pour la formation des chargés de projet de recherche en ce qui concerne les aspects théoriques et pratiques de la gestion des projets. Ce faisant, il apportera une solution à un problème auquel toutes les divisions du CRDI se butent de plus en plus dans la région, à savoir l'absence de compétences en gestion au sein des équipes de recherche qui reçoivent des subventions pour l'exécution de projets, en particulier pour des projets exécutés dans le cadre d'études interdisciplinaires.

Sciences de l'agriculture, de l'alimentation et de la nutrition

La Division des sciences de l'agriculture, de l'alimentation et de la nutrition (SAAAN) a pour objectif d'aider les individus à avoir un meilleur accès à la nourriture et aux autres produits de première nécessité par l'utilisation durable des ressources renouvelables. Elle tente de susciter des augmentations stables et durables de la productivité tout en respectant l'environnement et en accroissant les possibilités de revenu et d'emploi. Elle met l'accent explicitement sur la recherche qui bénéficie aux groupes les plus désavantagés. L'aide

retrouve des projets qui, dans plusieurs pays, contribuent à la création, ou au renforcement, de programmes de deuxième et troisième cycles. En jamaïque, par exemple, la division subventionne le programme d'études supérieures en collaboration, à la University of the West Indies, pour la création d'un programme de maîtrise en sciences sociales, et elle prépare une initiative similaire, à l'Université du Costa Rica, à l'intention des étudiants hispanophones.

Asie

Aux fins du présent rapport, cette région comprend l'Asie du Sud et l'Asie du Sud-Est. Il s'agit d'une région qui possède un assez bon réservoir de chercheurs dûment formés et un certain nombre de bonnes universités, qui sont de plus en plus en mesure d'offrir un enseignement de deuxième et troisième cycles. La division entend donc s'y concentrer sur l'« indigénisation » de la formation, en appuyant bon nombre de programmes de formation, institutionnels ou non, et favoriser la collaboration Sud-Sud. De fait, la dépendance à l'égard des institutions du Nord diminue au fur et à mesure que les institutions locales acquièrent une plus grande autonomie sur le plan intellectuel.

En ce qui concerne les thèmes de recherche, les activités de la Division des bourses continueront d'être axées sur la formation dans le cadre des projets, sur l'établissement de liens directs entre les bourses individuelles de formation et les activités de recherche, et sur la mise en place, dans la mesure du possible, de moyens favorisant la formation à long terme dans la région, c'est-à-dire du matériel autodiadactique, des personnes ressources, des réseaux et des activités de formation. Pour ce qui est du premier thème, la division continue, chaque fois que c'est possible et approprié, de cofinancer des projets avec les divisions de recherche, afin d'y intégrer le développement des ressources humaines des l'origine et, de plus en plus, de surveiller l'efficacité de cette formation « en cours d'études ». En ce qui a trait au deuxième thème, la division prendra des mesures supplémentaires pour s'assurer que toute bourse de formation individuelle, financée à même le budget des projets ou le budget des bourses, est reliée directement aux priorités de la division de recherche compétente en ce qui concerne le boursier choisi, la formation suivie et la participation subséquente du boursier à des activités de recherche bien définies. Finalement, en ce qui concerne le troisième thème, la division tente de repérer des installations stables où offrir sur place des activités de formation à long terme, et en



formation au niveau de la maîtrise est en général offerte sur place), plusieurs de ses activités portent sur le renforcement des capacités locales de formation et sur l'examen de modèles de échange *administrateurs supérieurs des universités en Amérique centrale et dans les Antilles espagnoles* en est un bon exemple. Il a pour but d'offrir la possibilité, à des administrateurs de l'enseignement supérieur d'Amérique latine et des Antilles hispanophones, de réfléchir et d'échanger sur le rôle joué par les universités dans leur société, sur les modèles organisationnels de échange pour l'enseignement des premier, deuxième et troisième cycles, sur la gestion des programmes d'enseignement et de recherche, et sur la planification à long terme. En cette période où les pays d'Amérique latine sont très soucieux de leur capacité de concurrencer, sur le plan économique, les autres régions du monde, les universités et les centres de recherche accordent plus d'attention au rôle que peuvent jouer les institutions d'enseignement supérieur dans un nouveau contexte mondial caractérisé par l'utilisation intensive du savoir dans tous les secteurs du développement économique. Avec les restrictions budgétaires en toile de fond, l'enseignement supérieur fait face à des préoccupations immédiates, comme le réexamen de la pertinence des programmes d'études et de l'enseignement, l'apport de solutions aux problèmes actuels en matière de développement et l'amélioration des systèmes de gestion afin de moderniser les établissements de recherche et de retenir des ressources humaines hautement qualifiées.

Parmi les autres activités de la division, on

formation dans la région. C'est dans ce but que la division a subventionné, au cours de l'année, le projet *Enseignement supérieur et recherche et développement dans les universités africaines*, grâce auquel l'Association des universités africaines peut mettre au point des outils qui lui permettront d'établir un mécanisme permanent pour la cueillette et le traitement des données, et pour l'évaluation du potentiel des universités d'Afrique centrale et occidentale en ce qui a trait à l'enseignement et à la recherche de cycle supérieur.

Amérique latine et les Antilles

En Amérique latine et dans les Antilles, la communauté universitaire et le milieu de la recherche sont solidement établis, et les besoins en formation sont très différents de ce qu'ils sont en Afrique. On trouve en effet une masse critique de chercheurs dûment formés dans la plupart des pays de la région, et bon nombre des universités des plus grands pays (Argentine, Brésil, Chili, Colombie, Jamaïque, Mexique et Pérou) sont en mesure d'offrir une formation de cycle supérieur, au moins au niveau de la maîtrise.

La division aborde donc la question du développement des compétences et des ressources humaines sous un tout autre angle dans cette région. Elle s'y concentre d'abord sur des rajustements d'ordre qualitatif aux systèmes d'enseignement supérieur, accordant moins d'importance à la constitution d'un réservoir de chercheurs dûment formés.

Même si la division permet à des personnes de plusieurs pays de la région de recevoir une formation au niveau du doctorat au Canada (la



n'y aura pas, à chaque palier et dans chaque secteur

du pays, des personnes qui ont l'intérêt et la

capacité nécessaires pour prendre l'initiative de

projets de recherche, les exécuter et en appliquer les

résultats avec vigueur et compétence. La viabilité

demeure un objectif essentiel pour le CRDI; et, en

dernière analyse, elle se fonde sur les capacités

individuelles.

Les activités de la division en matière de

développement des compétences vont directement

dans le sens de l'objectif que poursuit le CRDI, à

savoir la mise sur pied d'institutions de recherche et

de formation autonomes dans le Tiers-Monde. Pour

la création de capacités de recherche, la division a

adopté le régime « institutions d'enseignants-

institutions d'enseignés », grâce auquel

l'investissement effectué dans la formation relie et

renforce tant l'institution qui offre la formation que

celle dont le personnel est formé. La formation

appuyée par la division doit donc mettre l'accent

sur la nécessité de faire appel, dans la mesure du

possible, à une institution d'un pays en

développement, de manière à favoriser la formation

sur place et à réduire la dépendance à l'égard des

institutions du Nord.

Afrique

Des trois continents qui font l'objet de ce rapport, l'Afrique est sans doute celui qui est le moins bien doté de chercheurs dûment formés et d'institutions aptes à offrir un enseignement de cycle supérieur à ses habitants. C'est pourquoi une bonne partie des ressources de la division est consacrée à la formation de deuxième et troisième cycles et au renforcement des compétences des chercheurs au moyen d'ateliers de formation

hautement ciblés. Parce qu'il y a très peu d'universités qui sont en mesure d'offrir une formation de cycle supérieur dans la région, plusieurs des bourses de maîtrise et de doctorat attribuées par la division sont offertes pour des études au Canada, comme en témoigne la liste des boursiers à la page 78.

Les progrès techniques réalisés dans le milieu

de la recherche continuent de présenter les plus

grands défis pour le programme dans la région.

Ainsi, les cours sur les méthodes avancées de

recherche, notamment le design expérimental,

l'analyse des données, l'utilisation des

micro-ordinateurs et les modules de gestion

statistique, sont très populaires. Ainsi, l'un des ces

cours, *Les micro-ordinateurs et la recherche en*

éducation, au Kenya, a permis de familiariser

20 chercheurs chevronnés avec les applications des

micro-ordinateurs en gestion et en analyse de

données pour la recherche en éducation. Parmi les

autres activités de même nature qui ont été

appuyées durant l'année, mentionnons la formation

offerte dans les domaines des sciences de

l'information, de l'automatisation des

bibliothèques, de la gestion de la recherche agricole

et de la gestion des établissements d'enseignement

supérieur. Tous ces cours ont été conçus, élaborés et

offerts par des chercheurs et des universitaires

rattachés à des institutions de la région,

conformément à l'engagement qu'a pris la division

à l'égard de l'« indigénisation » de la formation.

Pour évaluer les besoins, les problèmes et les

approches en ce qui concerne le développement des

ressources humaines en Afrique, il faut disposer de

données précises sur la disponibilité et l'utilisation

des ressources en matière d'enseignement et de

servira à un programme d'éducation sanitaire dans la région andine. Dans le second, *Stratégies de communication pour la prévention de l'abus des drogues*, on doit créer et évaluer un modèle communautaire de formation à la prévention de l'abus des stupéfiants.

Asie

L'Asie est un continent qui renferme plusieurs pays nouvellement industrialisés comptant des instituts de recherche et de développement assez sophistiqués et aussi des pays qui, au nombre des plus pauvres du monde, n'ont pas les moyens d'affecter des fonds à la recherche scientifique. La division a donc fait porter ses efforts sur les besoins particuliers des pays au lieu d'adopter une stratégie globale pour le continent. En général cependant, les projets financés pouvaient être groupés sous les sujets suivants : mécanismes de participation communautaire, systèmes et technologies de communication et diffusion et application des résultats de la recherche. Voici quelques exemples des projets financés par la division en Asie du Sud et du Sud-Est.

Dans la seconde phase du projet *Vulgarisation de la science*, les chercheurs expérimentent les techniques participatives audiovisuelles dans l'optique de l'élaboration d'approches novatrices pour déterminer les besoins et résoudre les problèmes de communautés isolées du Népal. Dans un autre projet aux Philippines, *La radio des femmes*, on formera les femmes à la communication interpersonnelle et aux techniques de leadership pour ensuite évaluer l'effet de cette formation sur leur participation à la programmation radiophonique.

La division a financé, en Asie du Sud et du Sud-Est, des activités d'évaluation des systèmes et des technologies de communication les mieux adaptées au travail de développement. En éducation permanente, la division finance une étude préliminaire visant la pré-épreuve d'une émission de télévision pilote qui pourrait former la base d'une série télévisée pour alphabétiser les collectivités analphabètes indiennes. En Thaïlande, la division a financé un projet qui vise à déterminer l'efficacité et l'opportunité de la programmation actuelle d'une chaîne de télévision nationale au plan de l'offre de services éducatifs à la population. Il est également prévu, dans ce projet, d'établir des profils des téléspectateurs pour en définir les besoins d'information.

Bon nombre de projets en Asie du Sud et du Sud-Est ont été financés par la division soit en

collaboration avec d'autres divisions soit seule dans le domaine de la diffusion et de l'utilisation des résultats de la recherche.

Le projet sur le semoir vise à aider à la fabrication et à la commercialisation de ce semoir par quelques fabricants du nord-est de la Thaïlande. Un projet, en collaboration avec la Division des sciences de la santé, fera la promotion de l'utilisation sans danger des pesticides à base de pyréthrinoides en Chine. Un autre projet subventionné avec les Divisions des sciences de l'agriculture, de l'alimentation et de la nutrition, des sciences sociales et des bourses rassemblera en un réseau 11 pays asiatiques pour renforcer et améliorer la production de petits ruminants. Deux projets, un en Inde et l'autre en Thaïlande, ont été financés en collaboration avec la section de nutrition et plusieurs autres divisions. Dans le projet indien, qui vise l'éducation de jeunes femmes en nutrition, la Division des communications consacrera ses fonds à la participation des usagères éventuelles de la recherche au processus de recherche de sorte à leur donner le pouvoir de s'attaquer à leurs problèmes et à leur trouver des solutions. Quant au projet thaïlandais, la division y appuiera l'équipe de recherche dans le domaine des communications.

Division des bourses

La Division des bourses aide les institutions de recherche des régions en développement du monde à développer les compétences leur permettant de réaliser des recherches de grande qualité et contribuer à la mise sur pied d'institutions de formation dans ces régions pour les aider à répondre à leurs propres besoins en matière de formation en recherche. Le concept du développement des compétences est donc le thème unificateur de la division et il se retrouve dans toutes ses activités.

Si la division met l'accent sur le développement des compétences, c'est pour bien marquer que le développement ne peut se faire exclusivement à partir de la croissance économique. Il doit aussi se préoccuper des êtres humains, et en particulier les aider à acquérir la confiance en soi et les capacités nécessaires à un processus autonome de définition d'objectifs et de prise de décisions. Le CRDI reconnaît en effet que les individus représentent la raison d'être des programmes de développement, en même temps que leurs principaux protagonistes, et que la recherche en soi, si valable, pertinente ou précieuse soit-elle, ne sera jamais considérée comme une composante utile ou viable du processus du développement tant qu'il

Par les années passées, les efforts de la Division des communications pour accroître les compétences en recherche et développement en Afrique occidentale ont porté sur l'amélioration de la communication entre les institutions et les services de vulgarisation au moyen de l'Association africaine des rédacteurs scientifiques et sur l'appui de l'effort par les organismes de recherche logolais visant à évaluer et coordonner la diffusion des résultats de la recherche au niveau national.

En Afrique orientale, une campagne sera lancée pour diffuser auprès du grand public les résultats sur l'hygiène buccale d'un projet financé par le CRDI. Dans une autre tentative d'application des résultats de la recherche financée par le CRDI, la division subventionne la réalisation d'une vidéo et d'un ouvrage non technique sur le contrôle et la gestion de l'eau dans une région semi-aride du Kenya : la collectivité de Kibwezi. Reconnaissant l'importance des grands médias, particulièrement des agences de presse, dans la diffusion des innovations scientifiques, la division aidera le All Africa Press Service à diffuser les résultats de sa recherche dans toute l'Afrique.

En Afrique du Nord, un projet avec le Centre pour le développement de la communication au Caire porte sur la transmission de messages complexes sur l'hygiène à des illettrés ou des semi-alphabétisés par des feuilletons télévisés. Ce travail pourrait aider à l'enseignement de l'hygiène et des systèmes de soins dans les pays où les récepteurs de télévision sont omniprésents.

Amérique latine et les Antilles

La crise de la dette et les pressions inflationnistes que connaît la majorité des pays de la région ont nui au financement de la recherche ou l'ont limitée, surtout la recherche exécutée par les organisations non gouvernementales (ONG). Par ses efforts en Amérique latine, la division a voulu atténuer les effets de ce manque de financement. Elle a financé des projets qui faciliteront le transfert des résultats de la recherche aux laboratoires au secteur manufacturier et aux organisations communautaires dans un but de création d'emplois. La division a aussi répondu à des propositions de travaux liées aux problèmes croissants que causent l'abus des stupéfiants et les maladies transmissibles sexuellement (MTS).

Un projet au Chili favorise le transfert d'une meilleure technologie de cuisson du pain issue de deux projets de la Division des sciences de l'agriculture, de l'alimentation et de la nutrition. Un autre projet en Colombie, *Communication et*

Quant à la prévention de l'abus des stupéfiants et des maladies transmissibles sexuellement (MTS), elle a été l'objet de deux projets, un en Colombie et l'autre au Pérou. Le premier, *Prévention des MTS et du SIDA chez les adolescents*, porte sur la réalisation d'une vidéo avec matériel complémentaire qui



La Division des communications s'est donnée pour principale tâche de trouver des façons de faire appliquer les résultats de la recherche financée par le CRDI. Dans l'exécution de sa tâche, la division finance des recherches et des travaux pratiques qui garantiront la communication des résultats des recherches susceptibles d'avoir des effets bénéfiques sur la vie des populations du monde en développement. La communauté scientifique n'est qu'un des publics que la division veut atteindre. Au nombre des autres publics tout aussi importants sont les décideurs, les chefs de gouvernement, les organisations intermédiaires et populaires et les individus.

La division est aussi chargée de la coordination globale de l'éducation publique, de la liaison avec les médias et le gouvernement et des stratégies de publication destinées à répondre aux demandes d'information des publics clés et à en susciter chez eux. La division a adopté une approche proactive dans ses activités d'éveil des gens à la recherche et au développement. Elle publie des documents d'opinion, des résumés de projets et des brochures notamment, sur toute une gamme de sujets en rapport avec le développement, organise des conférences de presse et des séminaires à l'intention des journalistes et offre des services de reportages hebdomadaires, et finance d'autres projets spéciaux et des expositions nationales pour mieux faire comprendre le développement aux Canadiens.

La division a participé à la production de plusieurs documentaires et d'émissions d'information télédiffusées, qui visaient à mettre les Canadiens au fait des questions touchant le Tiers-Monde et le rôle de la science. Mentionnons entre autres la série « North-South », une co-production avec la British Broadcasting Corporation (BBC) sur l'environnement et une série d'actualité, appelée « Chercheurs du Sud », sur les projets de recherche financés par le CRDI en Afrique, en Amérique latine et en Asie. Voulant diffuser les résultats de la recherche financée par le CRDI dans le monde en développement et dans le monde développé, la division a publié, en 1989-1990, 56 monographies, études techniques, actes de conférences et rapports manuscrits. Dix-sept de ces publications étaient issues de projets en Afrique, 7 de projets en Amérique latine, 5 de projets en Asie tandis que 3 portaient sur des questions canadiennes et 24

avaient une portée mondiale. La division finance aussi certains travaux de publication par les bénéficiaires de subvention, surtout quand il y a possibilité de stimuler l'édition dans le monde en développement. Ce financement a donné 31 publications en 1989-1990 : 3 portant sur l'Afrique, 8 sur l'Amérique latine, 11 sur l'Asie, 1 sur des études canadiennes et 8 sur des sujets d'intérêt mondial. À la page 78 de la section de langue anglaise de ce rapport annuel se trouve la liste des publications produites par le CRDI ou grâce à des subventions du Centre, au cours de l'année dernière.

La Division des communications a choisi des outils et des méthodes axés sur les bénéficiaires ultimes des projets. Ces outils comprennent l'évaluation du marché et le marketing social, les méthodes de vulgarisation, la transmission de l'information entre les collectivités, les établissements et les décideurs, les médias éducatifs, l'éducation non institutionnalisée et la conception, la production et l'épreuve de matériels imprimés et audiovisuels.

Une bonne partie des projets financés par la division portant sur l'application des résultats de la recherche et le renforcement des compétences autochtones au plan de l'utilisation des résultats de la recherche a été réalisée en collaboration avec d'autres divisions ou intéressait les résultats de la recherche subventionnée par d'autres divisions. Cette étroite relation s'applique à toutes les divisions de programme du CRDI. Si la réduction, l'année dernière, du budget de programme a diminué la capacité de la division de participer à la mise sur pied de projets multidivisionnaires, elle a eu l'effet bénéfique d'accroître la consultation avec les autres divisions et de permettre un suivi plus étroit des projets par le personnel de programme.

Afrique

La décennie 90 sera un tournant quant à l'avenir de l'Afrique. Les besoins sociaux sont plus grands qu'ils ne l'ont jamais été dans la majorité des pays et cela vaut aussi bien pour la menace de non-survie socioéconomique. Les indicateurs du développement ont radicalement changé en raison tant de la confusion interne que de facteurs externes. L'instabilité politique, la mortalité infantile, la sécheresse, les famines et les bouleversements socioéconomiques dominent la scène africaine. Dans de telles conditions, la mise sur pied de projets en communication a été difficile, dans la plupart des cas.

Le Parlement du Canada a créé le Centre de recherches pour le développement international (CRDI) il y a vingt ans dans une manifestation d'unanimité aussi rare que l'enthousiasme avec lequel les députés se sont attaqués à la tâche. Ils savaient qu'aucun pays de l'Organisation de coopération et de développement économiques (OCDE) n'avait jamais créé d'organisation internationale et décidé de la financer entièrement, et ils ont choisi de lui épargner le fardéau de la bureaucratie canadienne. Ils ont réalisé cet exploit en la dotant d'un Conseil des gouverneurs international, dont les membres seraient nommés en fonction de leurs réalisations scientifiques et de leur expérience du développement.

En l'espace de deux décennies, ce Conseil a attiré une richesse de talents et a été vanté comme nul autre auparavant. Le Conseil s'est toujours composé de personnes dont les noms et les réalisations sont légende. De personnes qui ont bien servi les pays en développement, comme tous les Canadiens dont l'avenir dépend de plus en plus d'un environnement sain, de partenaires commerciaux économiquement actifs et de membres de la communauté internationale qui soient socialement responsables et politiquement stables.

Dès leur première assemblée, en 1970, les gouverneurs comprennent le potentiel du CRDI et le fardéau qui reposait sur lui. Les observations faites alors avaient des années d'avance sur la perspective populaire :

- Les pays du Sud peuvent rarement tirer immédiatement parti des technologies du Nord, même en supposant que les transferts soient possibles;

- Il faut décourager les activités à forte consommation d'énergie et dommageables pour l'environnement;

- Il faut comprendre et éviter les erreurs et les échecs entraînés par des approches du développement insensibles et imposées du haut vers le bas;

- Il faut respecter les traditions culturelles et sociales locales et s'y conformer;
- Il faut étudier le rôle des femmes et améliorer leur bien-être et aussi celui des enfants;

- Il faut éviter de donner aux pays en développement les méthodes et produits rejetés par le Nord; et surtout
- Il faut que les travaux de recherche financés par le CRDI soient réalisés par des scientifiques des pays en développement travaillant au sein de leurs propres établissements car c'est la seule façon d'accroître les compétences et de trouver des solutions aux problèmes.

Pendant vingt ans, le personnel du CRDI s'est constamment efforcé d'être fidèle à ces orientations inspirées et de ne pas se faire distancer par les vagues successives de brillants interprètes de la scène mondiale qui ont siégé au Conseil. Ces hommes et ces femmes ont dit et redit que le développement se mesure qualitativement et non quantitativement, que la qualité de la vie et la dignité des individus sont les objectifs à atteindre, que la science et la technologie sont au service de l'humanité et non le contraire, et que le développement dans son interprétation la plus vaste est la seule voie efficace vers une sécurité durable.

Vingt ans et 2 000 projets de recherche plus tard, le CRDI est fier de ce qu'il a accompli, est touché de la cascade de prix et d'honneurs qu'il a reçue et est conforté de savoir qu'il a aidé à améliorer les conditions de vie à beaucoup d'endroits. Pendant tout ce temps, le CRDI a constamment changé dans un effort pour répondre mieux et plus efficacement aux besoins. Il veut faire une différence. Cependant, son Conseil des gouverneurs continue d'affirmer que le rôle du Centre est accessoire. Il ne fait qu'aider les pays en développement à s'aider eux-mêmes.

À une époque où les ressources financières sont limitées, où trop de Canadiens semblent ne se soucier que de leurs petits intérêts égoïstes et où le découragement le financement de la recherche, le CRDI s'efforcera d'être, à l'avenir comme il l'a été dans le passé, à la hauteur de sa réputation d'organisation novatrice, intellectuellement honnête et tournée vers l'humain. Dans les pages qui suivent, le CRDI rend compte au Parlement de ses activités du dernier exercice, comme il est tenu de le faire de par la loi qui l'a créé.

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Rapport annuel 1989-1990

Centre de recherches pour le développement international

Le Centre de recherches pour le développement international (CRDI) est une corporation instituée en 1970 par le Parlement du Canada pour encourager et subventionner des recherches techniques et scientifiques réalisées par les pays moins avancés, pour leur propre bénéfice.

Les domaines d'étude auxquels le CRDI prête une aide professionnelle et financière concernent : l'agriculture; l'entreposage, le traitement et la distribution des vivres; la nutrition; la foresterie; les pêches, la zootechnie; l'environnement; les maladies tropicales; l'approvisionnement en eau; les services de santé; l'éducation; la démographie; l'économie; les communications; les politiques urbaines; les questions liées aux femmes et le développement; les sciences de la terre et du génie et les systèmes d'information.

Bien que les fonds du CRDI proviennent totalement d'une subvention du gouvernement du Canada, le CRDI est dirigé par un Conseil des gouverneurs international, formé de 21 personnes. Aux termes de sa loi constitutive, le président, le vice-président et neuf gouverneurs doivent être de citoyenneté canadienne; parmi les dix autres gouverneurs, actuellement sept sont des ressortissants de pays en développement.

Les programmes du CRDI aident les pays en développement à se doter des capacités et des institutions scientifiques requises pour résoudre leurs propres problèmes.

Le CRDI met en évidence le rôle du scientifique dans le développement international et encourage les pays du Tiers-Monde à faire appel aux capacités de leur propre communauté scientifique. Les projets de recherche subventionnés par le CRDI sont proposés, élaborés, dirigés et administrés par les chercheurs du Tiers-Monde dans leurs propres pays, en fonction de leurs propres priorités.

Le CRDI aide à la création et au soutien de réseaux de recherche internationaux qui permettent aux pays en développement de profiter mutuellement de leurs travaux, de mettre en commun leur expérience et d'effectuer des recherches visant un même but. Il favorise également la coopération entre les chercheurs des pays en développement et leurs homologues canadiens.

- Le CRDI, dont le siège est à Ottawa, a six bureaux régionaux :
- Le Caire, Égypte : Moyen-Orient et Afrique du Nord
 - New Delhi, Inde : Asie du Sud
 - Nairobi, Kenya : Afrique orientale et australe
 - Dakar, Sénégal : Afrique centrale et occidentale
 - Singapour : Asie du Sud-Est, de l'Est et pays du Pacifique
 - Montevideo, Uruguay : Amérique latine et Antilles

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Chairman of the Board
Président du Conseil

le 14 juillet 1990

Le très hon. Joe Clark, C.P., Député
Secrétaire d'Etat aux Affaires extérieures
Ministère des Affaires extérieures
125, promenade Sussex
Ottawa, Ontario
K1A 0G2

Monsieur le Ministre,

Conformément aux dispositions de l'article 22 de la loi constitutive du Centre de recherches pour le développement international, j'ai l'honneur de vous faire parvenir, sous ce pli, le Rapport annuel du Centre de recherches pour le développement international pour l'exercice financier ayant pris fin le 31 mars 1990 comprenant les états financiers du Centre et le rapport du Vérificateur général.

Je vous prie d'agréer, Monsieur le Ministre, l'assurance de ma haute considération.

Janet M. Wardlaw

Janet M. Wardlaw

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Veuillez adresser vos demandes d'information au sujet du CRDI et de ses activités au bureau de votre région.

Le thème général de ce rapport annuel est bien illustré par les visages d'Afrique, d'Amérique latine et des Antilles, d'Asie et du Canada qui figurent sur la couverture.

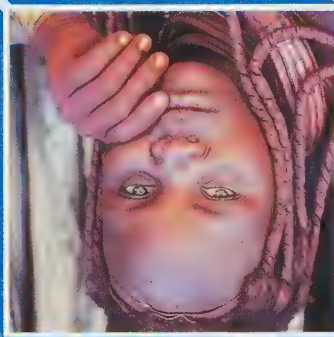
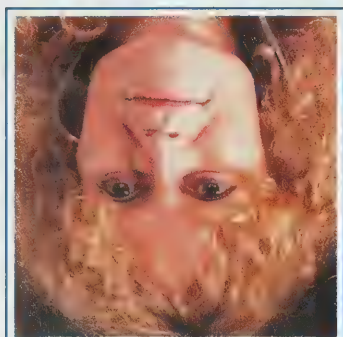
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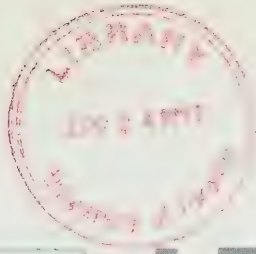
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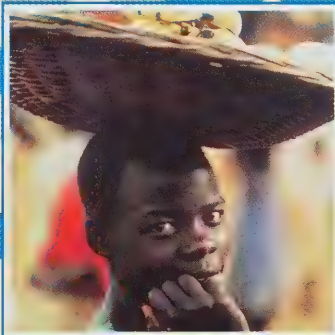


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IDRC

Annual report
1990-1991



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Please direct requests for information about IDRC and its activities to the IDRC office in your region.

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Annual Report 1990–1991

International Development Research Centre

The International Development Research Centre (IDRC) is a public corporation created by the Parliament of Canada in 1970 to stimulate and support scientific and technical research by developing countries for their own benefit.

The fields of investigation to which IDRC gives its financial and professional support include: farming; food storage, processing, and distribution; nutrition; forestry; fisheries; animal sciences; environment; tropical diseases; water supplies; health services; education; population studies; economics; communications; urban policies; issues relating to women in development; earth and engineering sciences; and information sciences.

Although IDRC is funded by the Canadian Parliament, its operations are guided by an international 21-member Board of Governors. Under the IDRC Act, the chairman, vice-chairman, and 9 other governors must be Canadian citizens; currently, 5 of the remaining 10 governors are from developing countries.

The programs that the Centre supports help developing countries build the scientific competence of their institutions and researchers so that these countries can work to solve their own problems. Research projects supported by IDRC are, therefore, identified, designed, conducted, and managed by developing-country researchers in their own countries, to meet their own priorities.

IDRC helps to create and supports international networks through which developing countries can learn from each other, share common experiences, and conduct similarly designed studies in areas of mutual concern. The Centre also promotes cooperation between researchers in developing countries and their counterparts in Canada.

IDRC has its headquarters in Ottawa, with regional offices in Cairo, Egypt; New Delhi, India; Nairobi, Kenya; Dakar, Senegal; Singapore; and Montevideo, Uruguay.

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Introduction

IDRC marked its 20th anniversary in October 1990 in an international environment stunningly different from that at its birth. The world's population had increased by 1.6 billion (43%); a debt crisis of monumental proportions had descended upon countries of both North and South; holes had been discovered in the ozone layer; world patterns of trade (in both goods and services) and of capital formation were evolving and changing rapidly; the "cold" war had ended, plummeting the Soviet Union and much of Eastern Europe into political and economic havoc; and the consumption of narcotics in northern countries had risen to record levels, spawning an immense international production and trafficking industry.

Against this background of extraordinarily rapid change, the developmental issues, which had attracted the attention of the Canadian Parliament in 1970, nevertheless remained disturbingly unresolved. Resources dedicated to official development assistance (ODA) worldwide had grown from US\$26 billion to US\$48 billion (countries of the Organisation for Economic Co-operation and Development only), striking progress had been achieved in food-grains production in Asia, improvements in life expectancy and infant mortality had been recorded in a number of countries, smallpox had been eliminated, and physical infrastructure had been greatly enhanced: all of these were monumental achievements.

Nevertheless, 1990 ended with a quarter of a million children dying each week in developing countries from preventable disease, with a substantial portion of the developing region's population living in "absolute poverty," with population growth showing little sign of decline, with massive rural-to-urban migrations and the resulting phenomenon of megacities, with bleak employment prospects for new entrants into the labour force in almost all developing countries, with striking increases in the incidence of several infectious diseases including those sexually transmitted, with unsustainable burdens upon the environment, and with demands for the entire range of social services beyond the capacity of most governments to respond effectively. As a result, governments are increasingly unable to cope, let alone function credibly; social discontent and political instability are widespread in the Middle East, Africa, Asia, and Latin America. One consequence is an increase in military expenditures and a disturbing growth in the weapons trade in all developing regions.

In these two decades, IDRC's annual grant from the Parliament of Canada has grown from \$5 million to \$114 million, a network of six regional offices has been put in place, and its support for scientific research extended to some 5 000 projects in more than 100 countries. IDRC's concept has inspired replication in several other OECD countries and inspired many tributes and honours, among them the 21st Century Award of Sigma Xi, the world's premier science honours society. The citation described IDRC as

... a mechanism which utilizes innovative approaches, emphasizes the advantage of flexibility, and exhibits sensitivity to developing country priorities.... Its perceptive, imaginative and generous *modus operandi* has profound implications for the stability and well-being of the interdependent world of the 21st century.

IDRC was launched by Parliament with high expectations. It was given considerable independence, a flexible mandate, and has received not insignificant resources. On several occasions during its two decades of experience in a world of rapid and continuing change, IDRC has chosen to reexamine its function and to question how best it can discharge its statutory responsibilities.

President David Hopper presented an important paper to this effect to IDRC's Board of Governors part way through his mandate in the early 1970s. On each of its 10th and the 15th anniversaries (1980 and 1985), IDRC prepared major, published documents (*Give Us the Tools*, 1980; and *With Our Own Hands*, 1985) consisting in significant part of evaluations of the Centre's performance prepared by scientists and others in developing countries. Emerging from those analyses were extensive policy and structural changes designed to maintain IDRC's relevance, to improve its responsiveness, and to augment its effectiveness.

This awareness of external change, and a willingness to adapt to it, have been as critical to IDRC's continuing effectiveness and world leadership as has been the superb performance of its highly professional staff.

IDRC's mandate

The Centre's statutory mandate was derived from observations made by the United Nations Advisory Committee on the Application of Science

and Technology to Development in the mid-1960s that

Only a very small fraction of the world's scientific and technical resources is devoted to the problems of the developing countries; the overwhelming proportion of the world's intellectual capital, as well as its physical capital, is applied toward meeting the needs of the highly developed countries.

A few years later, the Pearson Commission found little change and, indeed, noted that overwhelmingly the scientific activities within developing countries were carried out by expatriates, and all too often for the principle benefit of interests outside those countries.

Prime Minister Lester B. Pearson stated in June 1967 that

The challenge for international development is to find new instruments for concentrating more attention and resources on applying the latest technology to the solution of man's economic and social problems on a global basis.

Mr Pearson's emphasis on technology reflected the views of such competent observers as Nobel Laureate Sir Arthur Lewis that the primary distinction between countries industrialized and those referred to as "developing" was the inability of the latter to acquire, to create, and to use technology. Two elements are in issue here because technology without an understanding of its nature and its purpose is of little worth. Knowledge is required; knowledge gained in large part through empirical research designed and conducted by those most immediately seized of the particular problems deterring development. Some of this research necessarily should be conducted by scientists within the developing countries; some could most effectively be pursued by others on behalf of those countries. Parliament recognized the duality and chose to empower the fledgling IDRC in both respects. The Centre's statute reads:

The objects of the Centre are to initiate, encourage, support and conduct research into the problems of the developing regions of the world and into the means for applying scientific, technical and other knowledge to the economic and social advancement of those regions

IDRC was to be a knowledge organization; one that would stimulate, generate, and disseminate knowledge. The peculiar mix of these activities as needed is generally acknowledged to be the genius of the Centre. The relationship of one activity to the

other varies with time, region, discipline, and institution; the choice depends in each instance upon the experience and sensitivity of IDRC's staff and its international Board. The ability of the Centre to bring together so wisely its panoply of resources has given it an enviable reputation, one that would not be possible were the organization but a simple granting agency.

IDRC's philosophy

The views of Pearson and Lewis rest on a sound anthropological footing — that footing, in turn, is the basis for IDRC's philosophy.

The human animal distinguishes itself from all other biological species in two respects: unlike any other creature, humans are tool makers and record keepers. Through the millennia, tools have been employed on occasion for constructive accomplishment and, on other occasions, for cruelty and destruction. Records have permitted knowledge to be accumulated for problem-solving and for well-being; records have also served as a reflection of injustice, real and perceived, kindling resentment and reprisals, sometimes over centuries.

The ability to make tools and keep records has elevated the human species into a position so superior to all others that it dominates them all without exception. As between societies and communities, those that are most proficient in each respect have gained a clear ascendancy in terms of general well-being. Not surprisingly, in the final decades of the 20th century, the salient distinction between those wealthy countries that are deemed to be "industrialized" and those less wealthy that are described as "developing" is found in the possession of technology as Sir Arthur Lewis observed. Quality of life, on an aggregate, societal basis, is measurable in technological terms. That being so, the power of a society to choose among technologies, and its ability to use what it chooses, are surely critical to developmental success. If that power is denied, if that ability is restricted, no other development activities are capable of sustained success. For that reason, much of what falls within the ODA rubric is not essentially development at all; food aid is a prime example.

Choice and use of technology are not necessarily exercised wisely, however, and it is open to IDRC to indicate what societal characteristics it regards as essential for "development." The Board of Governors addressed this question some years ago and identified three such characteristics: equity, participation, and sustainability.

The Board further ventured its own definition of development, one that continues to be pertinent and valid:

Development is a process of change that is aimed at improving the well-being of people in a way that is consistent with human dignity, which is best fostered in conditions of adequate nutrition, sound health, independence of spirit, pride in indigenous culture, and respect for human rights.

The Board added that, in its judgment, development decisions are investment decisions and must be made by those in the developing countries, not by IDRC. The central element of power of choice — the ability to assume control of decisions — requires refurbishment and enhancement.

IDRC employs ODA resources to pursue its purposes in three mutually reinforcing ways:

- By providing funds to other institutions for research and research-related activities;
- By providing advice, information, and services to other institutions on such activities; and

- By initiating and conducting developmental research activities.

How best to perform these functions and what proportion of its resources to assign to each is a continuing challenge for the Centre. In particular, to ensure that efficiency does not mask ineffectiveness and that convention does not blur relevance are managerial requirements. The narrow focus necessary for research, as industrialized countries have long understood, can deter the harmonization of activity necessary for effective problem solving; it can also encourage the dedication of resources long after developmental circumstances have altered substantially.

Should IDRC not consciously and continuously evaluate its programs and its structure, therefore, its ability to respond flexibly and coherently to real need and its efficiency in discharging its mandate will both deteriorate. It must acknowledge and respond to growing regional differentiations, to the evolving research competencies of developing countries, and to the fluctuating patterns of available resources.

Program activity

In October 1990, IDRC celebrated its 20th anniversary as an organization dedicated to promoting the generation, sharing, and use of knowledge on the problems of the developing world. During the months leading up to that anniversary, IDRC launched a review of its strategy, its mode of operation, and its main purposes.

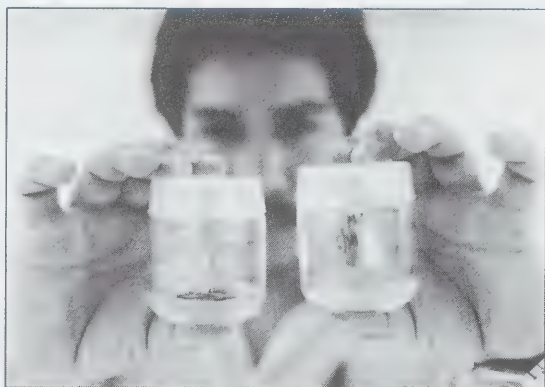
Although this exercise is designed to be completed only in the latter part of 1991, the analysis of the Centre's past efforts in support of developing-country researchers has shown how much more complex today's activities are than the relatively straightforward "projects" that were the Centre's starting point two decades ago. That analysis has highlighted for us the importance of concepts such as networking and multidisciplinary; it has demonstrated that sophisticated scientific approaches can be used to develop "simple" technologies; it has taught us lessons on how to better stimulate cooperation among donor agencies for improving support of developing-country researchers; it has brought the Centre to face the challenge of assisting in strengthening research institutions that have been weakened by the prolonged and pervasive eco-

nomic crisis in many developing countries; and it has helped us face up to the challenge of promoting the application of the results of research at all levels from Cabinet Rooms to rural clinics.

In previous annual reports, we have tried to show practical examples of the many projects that the Centre has supported around the developing world in our main fields of activity — agriculture, health, the social sciences, information, engineering, communications, and so forth. This year, we display our program from different vantage points that will, we hope, serve to illustrate the many other aspects of "strengthening the research capacity of developing countries" — which still remains one of the principal objectives of IDRC.

Networking

In today's world of high-technology communications, it has become commonplace to talk of "networking" with the physical networks of contemporary telecommunications acting as metaphors for the complex array of linkages through which people interact. In the world of research, networking describes an increasingly elaborate system through



Networking for small-scale farmers

For Canadians, a banana is a just healthy choice for dessert. For many Africans, however, bananas are their primary source of calories and nutrients. For many farmers in developing countries, the fruit is their major cash crop. Despite its importance for the poor, until recently, little research had been done on the banana, or its starchy cousin, the plantain. Therefore, when farmers in Latin America and Africa began to

notice a drastic drop in banana and plantain production in the 1970s and 1980s caused by the Black Sigatoka disease, they had nowhere to turn for advice. In the 1980s, over a 4-year span in Costa Rica, annual plantain exports fell from 26 000 to 5 000 tonnes because of Black Sigatoka. Naturally, these blights hurt the small-scale, subsistence farmers the most. Although large, commercial plantations can afford fungicides to ward off plant disease, most small-scale farmers cannot.

In 1984, IDRC stepped into the gap and created the International Network for the Improvement of Banana and Plantain (INIBAP). IDRC is one of a consortium of donors who support the work of INIBAP. The network combined a small central administration located in Montpellier, France, with regional technical offices in four developing countries. The central office was strategically located in the same city as France's important Centre de coopération internationale en recherche agronomique pour le développement (CIRAD) in Montpellier. CIRAD's library also houses one of the world's best collections of materials relating to bananas and plantains. The

which researchers join forces in pursuit of common goals. In the world of development research, networking began as a means of combatting the intellectual isolation suffered by many developing-country researchers and has now flowered into a powerful tool for combining the talents and resources of scattered groups and individuals working in many diverse fields.

In the industrialized world of the North, scientists can take for granted their ability to communicate with colleagues in distant institutions by electronic mail, by telephone, or face-to-face at frequent professional meetings. Science is a highly social activity and thrives on the free flow of information among its practitioners: this flow acts as a stimulus to creativity. In sharp contrast, many scientists in the developing world must struggle in isolation from their colleagues, with few chances to meet and discuss shared technical interests, with little access to current literature, and often with virtually no knowledge of who their colleagues might be in adjacent countries. In these circumstances, donor agencies such as IDRC have devoted extensive efforts to devising means of allowing these researchers to stay in touch and to work together.

Networks in the developing world often start off modestly as simple programs in which partici-

pants with a common interest — for example, in a particular crop such as oilseeds, or a policy area such as education, or a widely shared development problem such as urban water supply — agree to share information on a regular basis, often via a newsletter, and to meet periodically to compare results and methodologies.

With time, as these networks become stronger, the participants usually will develop a shared research agenda, with each participating group emphasizing a particular aspect of the topic that brought the participants together in the first place. In some cases, different network participants will take on special responsibilities, such as for training, in others, the stronger institutions will pay particular attention to assisting their less-experienced colleagues. In recent cases, where Canadian research groups have become involved, the Canadians play a special role, serving as “windows” into the scientific community of the industrialized world for their colleagues in the South.

The concept of networking has now taken such hold that it has been used in the design of new, international institutions, such as INIBAP, the International Network for the Improvement of Banana and Plantain, to link National Research Programs together — in this case, programs dealing with

small INIBAP office provides cost-efficient coordination of projects, publications, and exchanges of plant varieties and research material. The regional offices — one in Burundi for eastern Africa, one in Nigeria for West and Central Africa, one in Costa Rica for Latin America, and one in the Philippines for Southeast Asia — handle most of INIBAP's scientific work, including genetic improvement and tissue-culture research. The regional offices also support national programs for banana research.

The foremost challenge for banana and plantain researchers now is to develop plant varieties resistant to pests and disease, especially Black Sigatoka. To this end, INIBAP developed an international program to collect and test different varieties of the fruit. A variety of plantain resistant to Black Sigatoka was recently found in Central America but, although flavourful, its short, round shape is unacceptable to local consumers. Researchers are now cross-breeding the fruit hoping to produce a new variety that has disease-resistance combined with the traditional oblong shape.

INIBAP also coordinates the crucial exchange of plant varieties between countries. Because exchanges carry the risk of spreading diseases or pests from one country or continent to another, the samples first go through transit laboratories in France or Belgium. The laboratories screen the specimens, usually by multiplying sample cuttings in test tubes and growing them into new plants. If found safe, the plants are sent to recipient researchers and grown in the field under supervision.

The network also links up researchers on projects, allowing them to learn from each others' work and avoid duplication. The network publishes research results and keeps a flow of relevant publications circulating through the scientific community.

Because INIBAP-sponsored research is geared to the small-scale farmer, new products must be cheap to be useful. A relatively inexpensive fungicide is now available that is more successful in controlling Black Sigatoka. Research has also improved spraying techniques to make small volumes of fungicide go further.

bananas and plantains — as a preferable alternative to creating new facilities from scratch.

Multidisciplinary

There has been much debate in the scientific communities of both the South and the North, over the last many years, concerning the validity and the practicality of “multidisciplinary research.” The scientific disciplines, such as biology, chemistry, mathematics, economics, and sociology, have developed powerful bodies of knowledge and arrays of techniques related to the understanding of specific sets of carefully defined problems; these disciplines have served humanity well in creating an immense fund of human knowledge.

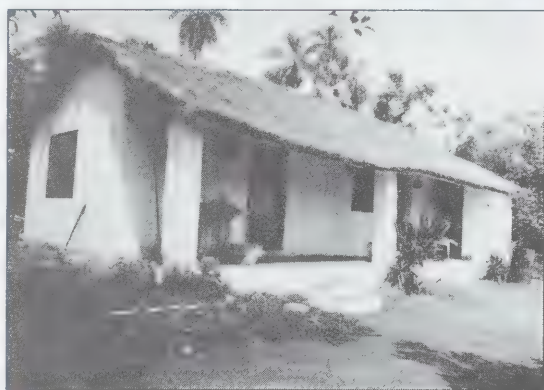
Few disciplines, however, ever claim to deal with the problem set of other disciplines and, most particularly, the social and physical sciences have traditionally had completely different interests. The question of multidisciplinary has, in the past, been resolved effectively, either within the boundaries of the natural sciences — where teams of physicists,

chemists, and biologists are found tackling many physical problems — or within the social sciences — where economists, sociologists, and political scientists can be found tackling complex issues together. The problems of multidisciplinary that give rise to the greatest complexity are those that transcend the boundaries of both the natural and the social sciences, as is typical in research addressing the practical problems of development.

In a recent paper for IDRC’s Board, it was argued that

The Centre’s encouragement of more integrated, cross-disciplinary approaches to research has stemmed from a recognition of the frequent inadequacy of addressing development problems through single-discipline projects. Much remains to be learned about when and how to apply cross-disciplinary research.

A good example of the intricacies of the arrangements that can be necessary to mobilize a multidisciplinary group in a developing country is



Building better homes to prevent Chagas disease

In two villages in Paraguay, 133 families now live in sturdy, inexpensive houses they rebuilt through an IDRC-sponsored program. These South American homes are not just stronger, however, they are also resistant to insects that carry one of Latin America’s most wide-spread diseases — Chagas’ disease. Triatomine insects, also called cone-nosed bugs, thrive in the rural tropics and often breed in wall cracks, particularly inside dark, poorly ventilated houses. At night, they drop onto sleeping family

members, suck their blood, and inject Chagas-ridden feces into their victims.

It is a stealthy disease. Most victims are infected as children, but do not feel the symptoms until 15 or 20 years later — during their prime working years. Pregnant women can also pass on the disease to their newborns. In Latin America, an estimated 16–18 million people are now infected, and more than 90 million are at risk. The disease causes muscle tissue enlargement in the esophagus, colon, or heart. Victims may suffer painful digestive blockages. About 1 in 10 experience heart problems, often dropping dead from heart attack. There is no effective vaccine or treatment for Chagas.

Governments have traditionally used insecticides to kill triatomine insects, with little success. Spraying is expensive and temporary, and the most successful insecticides are often toxic to people and animals.

In contrast, the 3-year IDRC project, begun in 1988, took a sustainable approach to the problem. Researchers set out to find the best and cheapest ways to renovate rural homes — eliminating roof and wall cracks and improving lighting and ventilation — thereby wiping out the living quarters for the triatomines. Choosing

provided by the *Chagas disease-resistant housing* project in Paraguay, supported by IDRC. The project, as finally executed, involved researchers from four disciplines, drawn from institutions of different kinds (a university, government ministries, and non-governmental agencies) with no past history of working closely together as a team, and with support from five different program divisions within IDRC. The considerable promise of the results now emerging from this particular project seem to provide justification for the lengthy negotiations that went on among all of the participants to define and structure the approach that was finally taken to this multifaceted problem.

From sophisticated science to simple technology

Because IDRC sees working on the problems of poverty as its primary mission, it has to remain very conscious that the results of the research that it supports will, in many cases, be used by the most disadvantaged groups in society who have had little

opportunity to use modern technologies. The challenge to many of the researchers supported by the Centre is to bring the tools of modern science to bear on the analysis of a problem while producing technologies that can be afforded, used, and maintained by the poor.

One such example is provided by the *Caman-chacas* project in Chile, which used sophisticated understanding of the physics of clouds to optimize the design and location of a device that would "milk" moisture from daily occurring fog clouds to provide potable water for fishing communities located on the Pacific Coast of the Atacama desert.

The actual collectors look like nothing more than giant volleyball nets and the water droplets are collected in plastic eaves troughs, but their apparent simplicity masks a good technical understanding of the formation, occurrence, and fate of the fog clouds whose water is being harvested.

In a similar vein, researchers supported by IDRC funding in Southeast Asia have taken the advanced techniques of "expert systems" and

three Paraguayan villages, they tested the effects on triatomine infestation of fumigation, house reconstruction, and the two approaches combined.

One of the greatest challenges was to get sustained community involvement in the project. This was crucial to ensure that the project results would be practical and easily applied in other villages. To achieve the scientific and community goals, the project took a multidisciplinary approach. It involved professionals from health, social sciences, forestry, and engineering, drawn from two universities, the government health department, and independent agencies.

The villagers began with some knowledge of Chagas, but did not realize their homes were incubating the disease. A sociologist and community health worker held community talks to explain the disease and motivate the villagers to participate in the project. This was no small feat as each family had to provide almost half the cost of rebuilding their home — about US\$250 in labour and materials. The per-capita gross national product (GNP) in Paraguay is only US\$1 180 per year. Families also collected insects spotted in their houses for the researchers.

To understand the insect's behaviour and the disease's effect on community health, an entomolo-

gist and epidemiologist were involved. Residents were tested for the disease and, if infected, were referred to hospitals for assessment and treatment. On the engineering side, an architect, construction engineer, and timber engineer experimented with combinations of local materials, such as wood, clay, dung, straw, and sand, and with different door and window designs to produce the healthiest, most resilient, and most functional structure at the best price.

Early results from the project showed triatomine infestation was lower in renovated homes, but fumigation appeared to have the most immediate effect. Researchers say it will take several years to assess the long-term effectiveness of housing improvements on reducing Chagas. They also recommend more health education to change community habits. For example, villagers allow farm animals, which carry the insects, to run freely through their houses.

For future application of their results, the researchers developed an organizational strategy that would guide the simultaneous management of five 100-house improvement programs. The project results were presented to Paraguay's National Housing Council in late 1990 and are under review for possible inclusion in the national housing plan.

applied them to the technology of drying tea leaves, a technology that, in Sri Lanka, has changed little over the last two centuries. The problem in this case was to capture the knowledge of the tea-drying expert, who "knows" when conditions in the drier are right for producing a good quality of dried leaf and to control those conditions within a drier at those critical values during the prolonged time needed to dry a complete batch of tea.

Because every batch of tea tends to be different, the controls need to be reset regularly, but there are no mathematical models available to capture the subtleties of the necessary changes. To add to the challenge, a knowledge of the economics of the cooperatives that dry much of Sri Lanka's tea indicated that the investment that could be afforded for such a control system would have to be no more than about US\$1 000! Once again, the early results of the project are promising.

Cooperation among donor agencies

The amounts of funds that all of the donor agencies that finance research in the developing world have at their disposal are very small in comparison with the needs and demands for such funding. To cite but one comparison, although the USA spends about US\$120 billion annually on research

and development, a study commissioned by IDRC¹ provided "an estimate for total 1984 aid funding of research in the range of US\$1.3–1.4 billion."

Because the needs of all developing countries, when taken together, to have research carried out on the problems of their development certainly are no less than the needs of the USA alone, the disparities in funding are obvious, even if donor financing accounts for only 10–20% of all funding of research in all developing countries. (In some small countries, external sources certainly provide at least half of all research funding, whereas in some large countries with extensive scientific capacities, external donor support plays a much smaller role.)

In this environment of considerable need, donor agencies must take steps to see that the funds that they make available are used to greatest advantage while ensuring that the recipients' interests, rather than those of the donor community, are the interests that underlie the research agenda being supported. One effective means of meeting these twin objectives simultaneously has been the formation of "Research Consortia" as arrangements

¹ *External funding of development-related research: a survey of some major donors* — John P. Lewis, IDRC-MR160e, 1987, 68 pp.

Paving the way for better economic management in Africa

Over the past 20 years, most countries in the world have enjoyed rising income and productivity levels. During the same period, most African nations, already the poorest on earth, became more impoverished. The decline of African economies was partly due to external factors, such as deteriorating terms of trade and shrinking foreign aid, and partly due to structural problems, including weak management and dependence on primary exports. Some of the blame, however, also lay with bad economic policies — overvalued exchange rates, poor investments, and distorted incentive systems for food and industrial production. Few African governments had experienced economists to advise them. Instead, they based policy decisions on the past experience of other countries, including the very dissimilar economies of industrialized countries.

In 1983, IDRC took a step toward improving Africa's pool of economists by creating the *Macroeconomic Analysis Program for Eastern and*

Southern Africa. Based in Nairobi, the program both funded economic-policy research and provided African macroeconomists with a variety of support services including meetings, literature, and advice from resource persons. It provided the first opportunity for many African economists to have their work reviewed by peers and to link up with researchers studying similar problems. IDRC had originally supported macroeconomic research on the usual project-by-project basis, but quickly realized it was not cost effective. African economists were working in virtual isolation, with no access to essential literature, little monitoring, and few peers with whom to discuss their research. Their training at overseas universities began to depreciate the moment they returned home.

By 1987, the *Macroeconomic Analysis Program* had attained sufficient credibility that other agencies, including the World Bank, the US Agency for International Development (USAID), and the Rockefeller Foundation were willing to finance its expansion. The wider range African Economic Research Consortium (AERC) was established, which now supports macroeconomic

through which different donors can arrange for the coordinated funding of research on priority issues.

The "African Economic Research Consortium" provides essential support to researchers and policymakers in the countries of eastern and southern Africa from a variety of donors of different kinds (bilateral, multilateral, and private foundations) in ways designed to respect the region's research priorities while providing a unified control — exercised by those working within the region — over the total amount of financing available. To achieve this end, each of the donors has had to accept the definition of a common approach and common ground rules for allocating resources, each of which acts to the advantage of the region.

In recent years, this kind of concerted action among larger groups of donors has become somewhat more common. As familiarity with the process of coordination of this style becomes greater, it is to be hoped that it will become even more common, and that it will lead to a better form of support being available to the research communities of the developing world.

Donor consortia are also formed, from time to time, to allow for the stimulation of public debate, around the world, on issues of importance. The International Commission on Health Research for

Developing Countries, which was created and financed by a consortium of North American and European, public and private, donor organizations is one such example. Its final report² has given rise to a follow-up program focusing on the identification of *Essential National Health Research* programs for a growing number of participating developing countries. This follow-up is jointly managed, for the consortium of participating donors, by IDRC and the Swedish Agency for Research Cooperation with Developing Countries (SAREC).

Institution strengthening

Since its creation in 1970, IDRC has pursued the twin objectives of supporting applied research and, at the same time, seeking to strengthen the capacity of developing countries to carry out research programs on their own. Although much of the Centre's efforts in capacity building have, in the past, focused on training and upgrading the skills of individual researchers, recently, increased attention has been given to the need to strengthen the research institutions in which the researchers are expected to work.

² *Health research: essential link to equity in development* — Commission on Health Research for Development, Oxford University Press, New York, NY, USA, 1990, 136 pp

research throughout sub-Saharan Africa, including some francophone countries. (Another IDRC-supported network was also created in 1988 to support economic research specifically in francophone Africa.) The consortium's annual budget — which exceeds \$1 million — is now contributed by 11 agencies.

By pooling financing from many donors, AERC has reduced duplication of donor efforts, lowered administrative costs, and created an opportunity for African researchers to play a stronger role in setting research priorities. In 1990, the consortium financed 41 research projects. Most concentrated on balance-of-payments issues and domestic financial management. In 1991, however, the focus will expand onto other subjects such as taxation policies and foreign-debt management.

Unlike Latin American academics who often work closely with government officials on policy decisions, African academics have historically had little influence on government policies. To over-

come this, the Consortium encourages university researchers to team up with government researchers on projects in the hope that the two will develop closer ties. This approach has had the most success in Tanzania. The Tanzanian government has recently involved local economists in discussions that assisted the government in its negotiations over structural adjustment.

In another instance, several AERC-supported economists attended a research strategy meeting held by the African Association of Central Banks in April 1990. The central bankers and research directors were sufficiently impressed by the economists' knowledge and technical skills that they later hired many of them for bank research.

AERC is now entering its second phase with increased support from its donors, a growing stream of publications, and plans for a made-in-Africa program of graduate training in economics. The seed planted by IDRC in 1983 has taken root and become a prominent feature on Africa's economic scene.

A well-functioning research centre needs more than a complement of trained scientists or scholars: it needs access to information, administrative and financial personnel who are familiar with the kind of environment needed to stimulate creativity, and a senior management structure that can define objectives and create the necessary coherence in the institute's program without stifling innovation.

To bring all of these elements together in an industrialized country is no easy task. To do so in the developing world, and particularly in some of the poorest countries, is a formidable challenge — but one that must be met. Over the last 2 years, IDRC has reached agreement with three universities in sub-Saharan Africa — Makerere in Uganda and the national universities in Bénin and Mozambique — to join with them in building faculties or programs dealing with issues of public health. In each case, it is expected that the programs of support will have to be of long duration, will have to deal with the training of both medical and nonmedical staff, and will have to tackle the definition of educational curricula as well as of research agenda.

Applying the results of research

Both the countries of the industrialized North and those of the developing South know, full well, that the act of financing research, in and of itself, is not sufficient to ensure that the knowledge generated by that research will be used in practice. In the North, research performed within an enterprise is usually felt to be more likely to be exploited than that done in other institutional settings, because of the way in which the enterprise is assumed to be attuned to the needs of "The Market." However, the science policy literature of the developed world, during at least the last two decades, has struggled with the problem of linking the research outputs of both government laboratories and universities with the productive sector; today in Canada, the topic of university–industry linkages is still high on the policy agenda.³

If these problems of linkage are difficult in the industrialized world, they are much less understood in the developing world. In response to the need to improve understanding of these linkages, IDRC itself, with its recipients, has embarked on a series of "experiments" in the promotion of "utilization" and, through its regional offices, has begun a series of regional consultations concerning the linkages

between developing-country universities and the productive sectors of their respective countries.⁴

Because IDRC supports research involving a wide spectrum of disciplines, and whose results are aimed at an even wider spectrum of potential users, the approaches that have been taken vary widely.⁵ In many of our social science activities, the explicit aim of projects is to influence the direction and content of governmental policy; the ways in which this can be achieved differ greatly depending upon the openness of particular governments to advice.

For the African Consortium for Economic Research, a simple expedient has been devised, research groups seeking support must have, among their members, an appropriate official from either a central bank or finance ministry. Although such an approach cannot guarantee that a government will follow any particular piece of advice flowing from research, it goes a good distance to ensure that the government is aware of research conclusions and that the researchers involved are aware of the constraints on the government's freedom to act.

Through much of the 1980s, the countries in the Southern Cone of Latin America were ruled by military dictatorships that were actively opposed to the conduct of social-science research, so it fell to foreign donors, such as IDRC, to provide support for groups of social scientists who had chosen to remain in their home countries, despite the risks involved. With the arrival of democratic governments in the area, many of those researchers now find themselves holding ministerial rank and in positions to implement the results of the research that they had carried out. A number of senior members of the Aylwin government in Chile and of the Alfonsín government in Argentina were supported by IDRC during the period of the military regimes.

Conclusion

Networking, multidisciplinary, institution strengthening, and utilization — these are some of the concerns that go to make up IDRC's "strategic framework" of policies and practices that the Centre is seeking to implement as it finances research around the developing world. The list of topics covered here is a sampling only of the longer list of preoccupations that underlie IDRC's ongoing efforts to improve its own understanding of the process of *Research for Development*.

³ See, for example, *Accessing university research: the experience of Canadian industry* — J. André Potworowski, IDRC-MR210e, 1989, 82 pp.

⁴ *Case studies on indigenous industrial R&D utilisation* — N.C.B. Nath and Lokesh Misra, IDRC-MR188e, 1988, 297 pp.

⁵ *Universities and the application of research results: proceedings of a workshop, Singapore, 19–20 September 1988* — Corazon F. Azucena, editor, unpublished, 124 pp.

Financial commentary and highlights

During 1990–1991, IDRC was subject to significant external and internal pressures, both created by revised projections of revenue. Once again, the Centre's operating budgets and longer term resource plans had to be completely revised to meet the latest projections of revenue levels. After years of experiencing an active pattern of revenue growth, it has now become obvious that IDRC is entering an era where resources will be at a premium and where we must concentrate on becoming more efficient and effective while giving full regard to economy.

Management's challenge is not only to cope with the lower projections of grants, but also to continue its current drive to improve the proportion of funds being spent on program activities as compared to operational activities. Currently, the ratio of program to operational expenditures is 77:23. The challenge for the last 2 years and for the next 3 years is to reduce the operational costs of our head office and regional offices to 20% of total expenditures. This target will be difficult to achieve and will require sacrifices and hard decisions, but IDRC's management is determined to reach a ratio of program to operational expenditures of 80:20 by financial year 1994–1995.

During the past 2 years, significant steps were taken to reduce operational expenditures. These steps included reducing the size of our regional offices in Cairo and New Delhi and required the relocation of all program officers located in these offices. The steps also included a reduction in staff from the approved level of 462 positions, contained in our Two-Year Resource and Operational Plan for 1990–1991 and 1991–1992 presented to IDRC's Board of Governors in March 1990, to a revised target of 429 positions, representing a 7% reduction.

These budgetary reductions were made while maintaining investment in office automation to sustain productivity. IDRC is now linked electronically to all of its offices and has achieved its target of one microcomputer per regular user. Both the head office and the regional office in Singapore are now on Local Area Network (LAN) systems and plans have been drafted to include the regional office in Montevideo in the LAN system in 1991–1992.

IDRC's decision to examine our operational costs closely with a view of reducing them was given additional impetus by the request from Treasury Board that we comply with the wage restraint and management initiatives announced by the Minister of Finance in his Budget of 26 February 1991. Furthermore, in April 1991, IDRC was advised that its grant would be reduced by \$8.0 million because of a reallocation of expenditures for official development assistance (ODA). The impact of this reduction was still being studied as this report was being written, but it will undoubtedly result in a further reduction in size.

IDRC's Parliamentary grant for 1990–1991 was slightly below the level received in 1988–1989, that is, 2 years earlier. In addition, the increase in our Parliamentary grant forecast for 1991–1992 is only 0.8%. In real terms (constant dollars), IDRC's grant is declining and this situation could continue for several years. On the other hand, expenditures on existing and new projects were lower than forecast for 1990–1991. The Centre ended the year with a surplus of revenues over expenditures of \$4.5 million, whereas in the preceding year there was a deficit of \$9.9 million.

IDRC's financial situation will, therefore, allow it to absorb part of the shock of the decrease in the grant forecast for 1991–1992. It should be noted

that this decrease coincides with the period when the Centre is implementing its new strategy, which is to take into account the projected Parliamentary grant for the coming years. In parallel to the reduction in expenditures during 1990–1991, the Centre has reduced the number of person-years at the head office in such a way as to ensure that performance is not significantly affected. The forecast is that the number of person years will continue to decrease in 1991–1992 and 1992–1993.

Revenues

Total IDRC revenues were slightly higher than those of the previous year and amounted to \$122.5 million. Revenues consist of the Parliamentary grant of \$114.1 million, investment and other income of \$3.3 million, and income for contract research of \$5.1 million. Figure 1 illustrates the trend in revenues over the last 4 years and for the year to come.

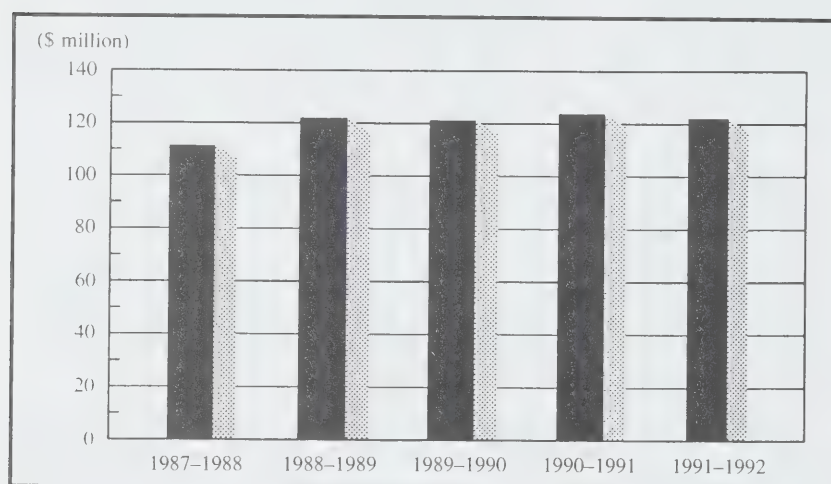


Figure 1. Total revenue for the Centre for 1987–1988 (actual) to 1991–1992 (budget).

The variances from the previous year for the three revenue components were very different from one another. The Parliamentary grant for 1990–1991, a total of \$114.1 million, represented an increase of \$5.6 million (5.2%) as compared to the preceding financial year. The \$3.3 million from investment and other income is the same as for the previous year, but was higher than the budgeted target of \$0.9 million. Lastly, the contract research revenues declined by \$4.2 million (-44.7%) in comparison to 1989–1990. This was because the V International Conference on AIDS (acquired immune deficiency syndrome) took place in the preceding financial year. Setting these revenues aside, contract revenues increased by \$2.2 million (75.9%).

For 1991–1992, total revenues of \$122.0 million are projected, a drop of 0.5% over 1990–1991.

Expenditures

Total expenditures in the financial year 1990–1991 reached \$118.0 million. This amount represents a decrease of \$12.9 million dollars, 9.9% over the values for the previous financial year. Figure 2 shows the relative share of each category of expenditure for 1990–1991.

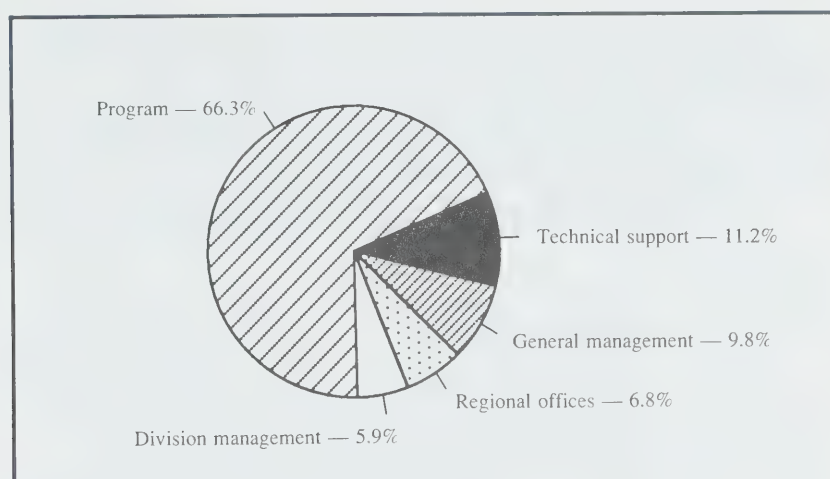


Figure 2. Breakdown of actual expenditures for 1990–1991.

Table 1 shows the forecast expenditures (budget) for 1991–1992 with the actual expenditures for 1990–1991 and the previous 3 years (in millions of dollars and as a percentage of the individual years' totals).

Development research activities

Development research activities reflect the direct costs of all scientific and technical research projects financed by IDRC in developing countries. These are the *raison d'être* for the Centre's existence. This category of expenditures includes projects that are identified, developed, and managed by developing-country researchers; projects that are supported by the Centre and international research networks; and contract research projects that are managed on behalf of other donor agencies.

In 1990–1991, expenditures for development-research activities reached \$66.9 million or 56.7% of the Centre's total expenditures. Expenditures for existing projects that involve, for the most part, development research dropped by 8.7% as compared to actual expenditures for 1989–1990. In addition, expenditures on new projects dropped by 19.6% as compared to the preceding year.

Table 1. Expenditures for 1987–1988 (actual) to 1991–1992 (budget).

	Budget		Actual							
	1991– 1992	% of total	1990– 1991	% of total	1989– 1990	% of total	1988– 1989	% of total	1987– 1988	% of total
Development research activities	\$ 69.9	55.9	\$ 66.9	56.7	\$ 78.5	60.0	\$ 67.9	58.5	\$ 62.4	58.6
Research-related activities	27.2	21.8	24.5	20.8	25.2	19.3	23.8	20.5	21.3	20.0
General management	11.9	9.5	11.5	9.8	11.1	8.5	9.9	8.5	10.4	9.8
Regional offices	8.3	6.7	8.0	6.8	8.7	6.6	7.2	6.2	5.8	5.5
Division management	7.6	6.1	7.0	5.9	7.4	5.6	7.2	6.2	6.5	6.0
Total	<u>\$125.0</u>	<u>100.0</u>	<u>\$118.0</u>	<u>100.0</u>	<u>\$130.9</u>	<u>100.0</u>	<u>\$116.0</u>	<u>100.0</u>	<u>\$106.4</u>	<u>100.0</u>

This significant decrease in expenditures was anticipated when the budget was prepared and was not a major variance from expectations. The decrease was the result of the reduction in the Parliamentary grant for 1990–1991, which compelled us to reduce the financial allocations and whose effects on expenditures were experienced last year. The decline in contract research was also a contributory factor.

However, a growth of 4.5% in development research activities is projected for next year.

Research-related activities

Research-related activities include technical support, small projects that lead to the development of research projects, and activities related to the dissemination of information or the application of the results of research. These activities also include maintaining a specialized, development-research library, which serves both the Canadian development community and IDRC staff, as well as implementing small projects that support ongoing IDRC programs. Expenditures for this category reached \$24.5 million in 1990–1991, or 20.8% of total Centre expenditures. This represented a drop of 2.9% as compared to the previous year.

Technical-support expenditures include the cost of program personnel, whose role is to assist in the development of new projects, monitor ongoing research projects, and provide technical support to recipients. In 1990–1991, technical-support expenditures were \$13.2 million, representing 11.2% of total Centre expenditures, a drop of 4.3% as compared to the preceding year.

For 1991–1992, research-related expenditures are forecast to rise by \$2.7 million or 11.1%. However, the actual technical-support activities portion of this category will experience a lesser increase, \$0.7 million or 5.4%.

Regional offices

The Centre's six regional offices play an important role in enhancing the effectiveness of the support that the Centre provides to research projects in developing countries. They facilitate contacts with grant recipients and improve the Centre's ability to respond to the needs of developing countries. These offices are located in Egypt, India, Kenya, Senegal, Singapore, and Uruguay. The total cost of operating these offices in 1990–1991 was \$8.0 million, a drop of 7.8% as compared to 1989–1990. This decrease is largely explained by the fact that there was an exceptional expenditure in the previous year as a result of moving the Bogotá office to Montevideo.

For 1991–1992, regional office expenditures are budgeted at \$8.3 million, which represents a 3.1% increase compared to the 1990–1991 expenditure levels.

Division management

In 1990–1991, expenditures for division management totaled \$7.0 million, a 5.5% decrease as compared to the previous year, and represented 5.9% of the total Centre expenditures for 1990–1991.

Expenditures for division management are expected to increase by 9.4% over 1990–1991 levels to \$7.6 million.

General management

To sustain its overall operational effectiveness, the Centre must fulfill a wide variety of policy, executive, administrative, and service functions. These functions are discharged by the Board of Governors; the Executive Office; the offices of the Secretary and the General Counsel, the Treasurer, and Human Resources; as well as the Administration, Electronic Data Processing, and Internal Audit departments.

General management expenditures reached \$11.5 million, an increase of 3.5% over the previous financial year (Table 2). Management expenditures grew over 1989–1990 levels from 8.5% to 9.8% as a proportion of total expenditures. This occurred because this category of expenditures includes many fixed costs, such as rent, utilities, and depreciation, which cannot be quickly reduced when rapid action is required.

For 1991–1992, the expenditures for management are projected to increase by 3.1%, an increase of \$0.4 million.

Table 2. General management expenses for the 12-month period ending March 31, 1991.

	1991	1990
Salaries and benefits	\$ 6 891 464	\$ 6 505 670
Rent and utilities	1 890 128	1 806 255
Office and sundry	1 150 941	1 185 650
Depreciation and amortization	478 441	416 267
Travel and relocation	209 218	248 310
Governors' meetings	247 432	308 621
Professional and special services	278 663	366 521
Telecommunications	250 719	237 043
Working group expenses	63 889	8 064
Insurance	56 196	41 281
Total	<u>\$11 517 091</u>	<u>\$11 123 682</u>

Equity of Canada

The equity of Canada, which stood at \$4.0 million at the end of the previous financial year, rose to \$8.6 million by March 31, 1991. This increase is due to a surplus of investment income over that forecast and a reduction in expenditures from that budgeted for projects. For 1991–1992, the year-end equity is projected to drop again to \$5.5 million.

Person-years

For 1990–1991, the Centre's head office staff totaled 418.3 as compared to 439.9 in the budget. Vacancies were spread between technical support, division management, and general management. For 1991–1992, the number of head office person-years is expected to be reduced to 435.3. The actual number should be lower than this figure because of positions that will be eliminated and because of vacant positions that will remain unfilled during the year.

Appropriations

Total Centre appropriations for 1990–1991 were \$112.7 million, a decrease of 2.6% compared to \$115.7 million in the previous fiscal year. This total included \$73.0 million allocated for new projects, accounting for 64.8% of the total amount appropriated during the year. Figure 3 shows the allocation of program appropriations by geographic region.

For 1991–1992, total appropriations are projected to reach \$131.4 million, with the program appropriations of \$89.8 million representing 68.3% of the total.

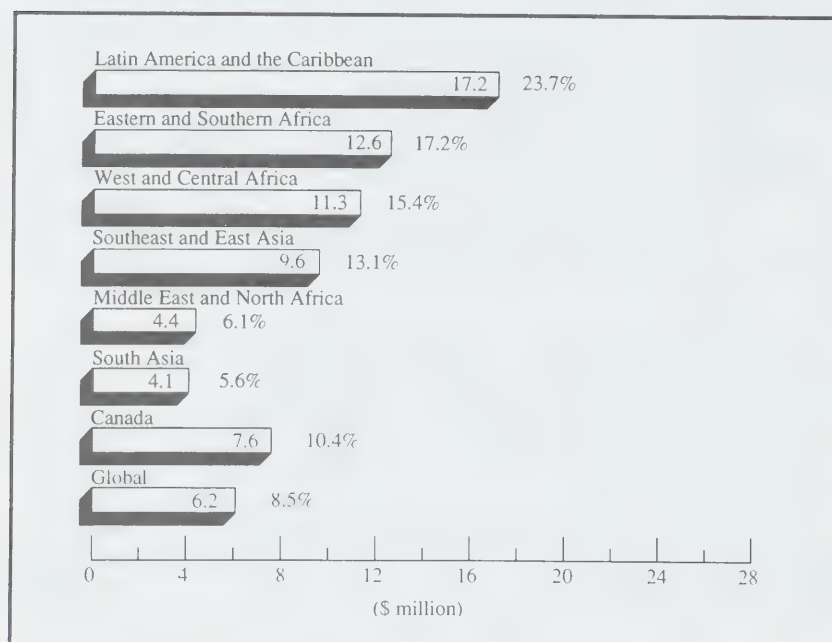


Figure 3. Actual appropriations for 1990–1991 by region.

Responsibility for financial statements

The financial statements have been prepared by management in accordance with generally accepted accounting principles appropriate in the circumstances. Management also assumes responsibility for all other information in the annual report, which is consistent, where applicable, with that contained in the financial statements. In support of its responsibility, management maintains financial and management control systems and practices to provide reasonable assurance as to the reliability of financial information, and that assets are safeguarded and the operations are carried out effectively. The Centre has an internal audit department whose functions include reviewing internal controls and their application on an ongoing basis.

The Board of Governors is responsible for ensuring that management fulfills its responsibilities for financial reporting and internal control. The Board exercises its responsibilities through the Finance and Audit Committee whose members are not employees of the Centre. The Committee meets with management, the internal auditors, and the external auditors on a regular basis.

The Auditor General of Canada conducts an independent examination in accordance with generally accepted auditing standards and expresses his opinion on the financial statements. His examination includes appropriate tests and procedures to enable him to report whether the financial statements are presented fairly. The external auditors have full and free access to the Finance and Audit Committee of the Board.

Financial highlights (\$ 000)

	Budget 1990-1991	Actual 1990-1991	% variance from budget	Actual 1989-1990	1990-1991 vs 1989-1990 (% change)
FINANCIAL ACTIVITY					
Revenue	\$118 530	\$122 541	3.4	\$121 083	1.2
Grant from Parliament of Canada	114 130	114 130	0.0	108 500	5.2
Contract research	3 000	5 133	71.1	9 277	-44.7
Investment and other income	1 400	3 278	134.1	3 306	-0.8
Expenditure	\$118 413	\$117 998	0.4	\$130 946	-9.9
Existing projects	49 943	49 734	0.4	54 450	-8.7
New projects*	28 438	28 554	-0.4	35 504	-19.6
Technical support	13 405	13 169	1.8	13 762	-4.3
General management	11 500	11 517	-0.1	11 124	3.5
Regional offices	7 780	8 048	-3.4	8 728	-7.8
Division management	7 347	6 976	5.0	7 378	-5.4
Excess of revenue over expenditure (expenditure over revenue)	\$ 117	\$ 4 543	—	\$ (9 863)	-146.1
PROGRAM ACTIVITY					
Appropriations	\$113 032	\$112 707	0.3	\$115 678	-2.6
New projects	73 000	72 997	0.0	74 686	-2.3
Technical support	13 405	13 169	1.8	13 762	-4.3
General management	11 500	11 517	-0.1	11 124	3.5
Regional offices	7 780	8 048	-3.4	8 728	-7.8
Division management	7 347	6 976	5.0	7 378	-5.4
Commitments	\$113 965	\$109 706	3.7	\$145 089	-24.4
Projects	73 933	69 996	5.3	104 097	-32.8
Technical support	13 405	13 169	1.8	13 762	-4.3
General management	11 500	11 517	-0.1	11 124	3.5
Regional offices	7 780	8 048	-3.4	8 728	-7.8
Division management	7 347	6 976	5.0	7 378	-5.4

* Includes contract research and division activity projects.

Five-year financial review (\$ 000)

	Budget 1991-1992	Actual 1990-1991	Actual 1989-1990	Actual 1988-1989	Actual 1987-1988	Actual 1986-1987
RESULTS OF OPERATIONS						
Revenue	<u>\$121 950</u>	<u>\$122 541</u>	<u>\$121 083</u>	<u>\$121 293</u>	<u>\$112 417</u>	<u>\$102 401</u>
Grant from Parliament of Canada	115 000	114 130	108 500	114 200	108 100	100 000
Contract research	4 773	5 133	9 277	4 199	2 107	1 423
Investment and other income	2 177	3 278	3 306	2 894	2 210	978
Expenditure	<u>\$124 980</u>	<u>\$117 998</u>	<u>\$130 946</u>	<u>\$115 975</u>	<u>\$106 401</u>	<u>100 969</u>
Development research activities*	69 936	66 925	78 459	67 875	62 362	60 382
Research-related activities	27 246	24 532	25 257	23 825	21 347	20 262
Research operational support	15 930	15 024	16 106	14 388	12 329	10 971
General management	11 868	11 517	11 124	9 887	10 363	9 354
Excess of revenue over expenditure (expenditure over revenue)	<u>\$ (3 030)</u>	<u>\$ 4 543</u>	<u>\$ (9 863)</u>	<u>\$ 5 318</u>	<u>\$ 6 016</u>	<u>\$ 1 432</u>
PROGRAM ACTIVITY						
Appropriations	<u>\$131 426</u>	<u>\$112 707</u>	<u>\$115 677</u>	<u>\$141 265</u>	<u>\$124 904</u>	<u>\$111 517</u>
New projects†	89 750	72 997	74 685	103 659	89 685	79 351
Technical support	13 878	13 169	13 762	13 330	12 527	11 841
General management	11 868	11 517	11 124	9 887	10 363	9 354
Regional offices	8 301	8 048	8 728	7 177	5 828	5 394
Division management	7 629	6 976	7 378	7 212	6 501	5 577
Commitments	<u>\$127 348</u>	<u>\$109 706</u>	<u>\$145 089</u>	<u>\$126 834</u>	<u>\$120 154</u>	<u>\$105 099</u>
Projects‡	85 672	69 996	104 097	89 228	84 935	72 933
Technical support	13 878	13 169	13 762	13 330	12 527	11 841
General management	11 868	11 517	11 124	9 887	10 363	9 354
Regional offices	8 301	8 048	8 728	7 177	5 828	5 394
Division management	7 629	6 976	7 378	7 212	6 501	5 577
Outstanding commitments	<u>\$104 724</u>	<u>\$105 200</u>	<u>\$116 100</u>	<u>\$104 400</u>	<u>\$ 96 000</u>	<u>\$ 88 343</u>

* Includes contract research.

† Includes division activity projects.

‡ Excludes contract research (special projects).

Research and support expenses
for the year ended March 31, 1991

	1991			1990
	Development research activities	Research-related activities	Research operational support	Total
PROGRAMS				
Agriculture, Food and Nutrition Sciences	\$21 510 313	\$ 4 822 468	\$ 1 191 782	\$ 27 524 563
Social Sciences	10 806 717	2 961 603	1 274 435	15 042 755
Health Sciences	10 154 987	2 901 744	1 019 398	14 076 129
Information Sciences	8 941 553	2 238 501	1 252 837	12 432 891
Earth and Engineering Sciences	6 820 729	1 188 471	584 233	8 593 433
Fellowships and Awards	4 807 419	998 173	382 608	6 188 200
				\$ 29 307 634
				15 979 385
				14 919 356
				13 658 405
				9 132 973
				6 977 894
PROGRAM-RELATED ACTIVITIES				
Regional offices	14 759	1 482 388	8 047 720	9 544 867
Communications	801 910	5 225 263	855 760	6 882 933
Special program activities	3 066 447	458 063	—	3 524 510
Development-research library	—	1 723 452	—	1 723 452
External liaison and relations	—	531 816	415 089	946 905
				10 048 907
				9 801 025
				7 263 111
				1 765 694
				968 389
	\$66 924 834	\$24 531 942	\$15 023 862	\$106 480 638
				\$119 822 773

Person-year levels

	1991-1992	1990-1991		1989-1990	
	Budget	Budget	Actual	Budget	Actual
PROGRAM DIVISIONS	<u>279.3</u>	<u>285.1</u>	<u>268.5</u>	<u>298.0</u>	<u>283.3</u>
Agriculture, Food and Nutrition Sciences	49.0	47.6	47.0	48.5	48.5
Social Sciences	42.0	44.0	42.2	48.0	43.3
Information Sciences	36.6	38.6	34.2	42.5	35.5
Project-related staff	36.4	36.4	37.2	36.5	39.4
Health Sciences	33.0	35.0	30.0	36.0	34.1
Earth and Engineering Sciences	17.0	17.0	13.6	18.0	17.0
Communications	15.0	15.0	16.3	26.0*	24.3*
Project-related staff	28.0	28.0	25.6	19.0*	18.3*
Fellowships and Awards	11.3	11.5	11.3	11.5	11.6
Office of Planning and Evaluation	11.0	12.0	11.1	12.0	11.3
 GENERAL MANAGEMENT	 <u>153.0</u>	 <u>151.8</u>	 <u>148.6</u>	 <u>158.5</u>	 <u>150.5</u>
Office of the Treasurer	37.0	37.8	36.6	39.0	35.5
Administration department	34.0	34.0	33.0	35.0	32.9
Office for Human Resources	18.0	17.5	16.8	19.5	18.0
Electronic Data Processing	16.0	16.0	16.2	14.0	15.4
Office of the Secretary and General Counsel	15.0	15.0	14.9	17.0	16.2
Executive Office	15.0	14.0	13.2	15.0	13.5
Regional offices administration	13.0	12.5	13.2	14.0	14.6
Internal Audit	5.0	5.0	4.7	5.0	4.4
 SECONDMENTS/SABBATICAL/ STUDY LEAVE	 <u>3.0</u>	 <u>3.0</u>	 <u>1.2</u>	 <u>3.0</u>	 <u>1.5</u>
TOTAL: HEAD OFFICE-HIRED STAFF	<u><u>435.3</u></u>	<u><u>439.9</u></u>	<u><u>418.3</u></u>	<u><u>459.5</u></u>	<u><u>435.3</u></u>

* Reflects Division's old structure.



AUDITOR GENERAL OF CANADA

VÉRIFICATEUR GÉNÉRAL DU CANADA

AUDITOR'S REPORT

To the International Development Research Centre
and the
Secretary of State for External Affairs

I have audited the balance sheet of the International Development Research Centre as at March 31, 1991 and the statements of operations, equity and changes in the financial position for the year then ended. These financial statements are the responsibility of the Centre's management. My responsibility is to express an opinion on these financial statements based on my audit.

I conducted my audit in accordance with generally accepted auditing standards in Canada, conforming with International Auditing Guidelines. Those standards require that I plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. The audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In my opinion, these financial statements present fairly, in all material respects, the financial position of the Centre as at March 31, 1991 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles in Canada, conforming with International Accounting Standards.

L. Denis Desautels, FCA
Auditor General of Canada

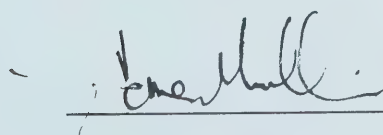
Ottawa, Canada
June 3, 1991

Financial statements for the year ended March 31, 1991

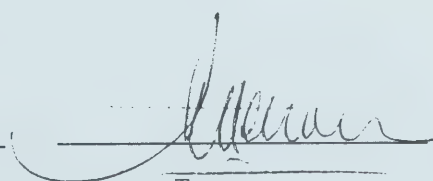
Balance sheet as at March 31, 1991

	1991	1990
ASSETS		
Current		
Cash and short-term deposits (Note 3)	\$16 894 314	\$14 115 678
Accounts receivable	1 409 170	1 040 856
Prepaid expenses	882 017	849 248
	19 185 501	16 005 782
Recoverable deposits	175 976	206 894
Property and equipment (Note 4)	5 031 677	5 477 839
Endowment funds (Note 5)	293 041	433 475
Total assets	<u>\$24 686 195</u>	<u>\$22 123 990</u>
LIABILITIES		
Current		
Accounts payable and accrued liabilities (Note 6)	\$10 225 827	\$11 303 825
Contract research (Note 7)	650 181	1 426 291
	10 876 008	12 730 116
Accrued employee separation benefits	2 941 320	2 623 128
Deferred rent — Head office	2 007 001	2 311 918
Endowment funds (Note 5)	293 041	433 475
Total liabilities	16 117 370	18 098 637
EQUITY	<u>8 568 825</u>	<u>4 025 353</u>
Total liabilities and equity	<u>\$24 686 195</u>	<u>\$22 123 990</u>
Contractual commitments (Note 9)		

Approved:



Acting President



Treasurer

Statement of operations
for the year ended March 31, 1991

	1991	1990
EXPENSES		
Development-research activities		
Project grants	\$ 56 382 561	\$ 63 424 558
Centre projects	5 408 936	5 757 433
Contract research (Note 7)	<u>5 133 337</u>	<u>9 276 881</u>
	<u>66 924 834</u>	<u>78 458 872</u>
Research-related activities		
Technical support	13 169 049	13 762 411
Program-development support	5 739 734	6 683 451
Information dissemination	3 899 706	3 045 514
Development-research library	<u>1 723 452</u>	<u>1 765 694</u>
	<u>24 531 941</u>	<u>25 257 070</u>
Research operational support		
Regional offices	8 047 720	8 728 412
Division management	<u>6 976 142</u>	<u>7 378 419</u>
	<u>15 023 862</u>	<u>16 106 831</u>
Total research and support expenses	<u>106 480 637</u>	<u>119 822 773</u>
General management expenses	<u>11 517 091</u>	<u>11 123 682</u>
	<u>117 997 728</u>	<u>130 946 455</u>
REVENUE		
Grant from Parliament of Canada	114 130 000	108 500 000
Investment and other income	3 277 863	3 306 151
Contract research (Note 7)	<u>5 133 337</u>	<u>9 276 881</u>
	<u>122 541 200</u>	<u>121 083 032</u>
EXCESS OF REVENUE OVER EXPENSES		
(EXPENSES OVER REVENUE)	<u>\$ 4 543 472</u>	<u>\$ (9 863 423)</u>

Statement of equity
for the year ended March 31, 1991

	1991	1990
Balance at the beginning of the year	\$4 025 353	\$13 888 776
Excess of revenue over expenses (expenses over revenue)	<u>4 543 472</u>	<u>(9 863 423)</u>
Balance at the end of the year	<u>\$8 568 825</u>	<u>\$ 4 025 353</u>

Statement of changes in financial position
for the year ended March 31, 1991

	1991	1990
Operating activities		
Cash provided by (used in) operations		
Excess of revenue over expenses (expenses over revenue)	\$ 4 543 472	\$ (9 863 423)
Items not affecting cash		
Amortization of property and equipment	1 374 701	1 322 278
Provision for employee separation benefits	494 327	303 142
Loss (gain) on disposal of equipment	(121 724)	28 508
Amortization of deferred rent	<u>(304 917)</u>	<u>(304 917)</u>
	<u>5 985 859</u>	<u>(8 514 412)</u>
Changes in noncash operating assets and liabilities		
Accounts receivable	(368 314)	(152 203)
Prepaid expenses	(32 769)	545 412
Recoverable deposits	30 918	(23 464)
Accounts payable and accrued liabilities	(1 077 998)	(1 069 871)
Payment of employee separation benefits	(176 135)	(402 693)
Contract research liability	<u>(776 110)</u>	<u>(1 106 037)</u>
	<u>(2 400 408)</u>	<u>(2 208 856)</u>
Cash provided by (used in) operations	<u>3 585 451</u>	<u>(10 723 268)</u>
Investing activities		
Additions to property and equipment	(1 041 560)	(2 336 333)
Proceeds on disposal of equipment	<u>234 745</u>	<u>278 192</u>
	<u>(806 815)</u>	<u>(2 058 141)</u>
Increase (decrease) in cash	2 778 636	(12 781 409)
Cash and short-term deposits at the beginning of the year	<u>14 115 678</u>	<u>26 897 087</u>
Cash and short-term deposits at the end of the year	<u>\$16 894 314</u>	<u>\$14 115 678</u>

Notes to financial statements as at March 31, 1991

1. Authority and objective

The International Development Research Centre, a Corporation without share capital, was established in 1970 by the Parliament of Canada through the International Development Research Centre Act. The annual grant received from the Parliament of Canada is pursuant to External Affairs Vote 60 and 50 for the years ended March 31, 1991 and 1990 respectively.

The objective of the Centre is to initiate, encourage, support, and conduct research into the problems of the developing regions of the world and into the means for applying and adapting scientific, technical, and other knowledge to the economic and social advancement of those regions.

2. Significant accounting policies

The financial statements have been prepared in accordance with Canadian generally accepted accounting principles, conforming with International Accounting Standards, and reflect the following significant accounting policies.

Property and equipment

Property and equipment are recorded at cost and amortized over their estimated useful lives. Leasehold improvements are amortized over the terms of the respective leases. The methods and rates used to provide for the amortization of property and equipment are:

	<u>Method</u>	<u>Rate (%)</u>
Computer equipment	Straight line	20
Leasehold improvements	Straight line	5–50
Office furniture and equipment	Diminishing balance	20
Vehicles	Diminishing balance	30
Telephone system	Straight line	20

Recognition of revenue

Parliamentary grants are recorded as revenue on an accrual basis.

Revenue in respect of contract research is recognized at the time the related project expenses are incurred. Contract research funds received in excess of expenses are included in current liabilities.

Accrued employee separation benefits

Employees are entitled to specified termination benefits, calculated at salary levels in effect at the time of separation as provided for by conditions of employment. The liability for these benefits is recorded as the benefits accrue to employees.

Deferred rent

Any rent-free period or other benefits associated with long-term leases are deferred and amortized over the term of the lease on a straight-line basis.

Pension costs

Employees are covered by the Public Service Superannuation Plan administered by the Government of Canada. Contributions to the Plan are required from the employees and the Centre. These contributions represent the total liability of the Centre and are recognized in the accounts on a current basis.

Income taxes

The Centre is exempt from any liability for income taxes.

Foreign-currency translation

Foreign-currency transactions are translated into Canadian dollars by the use of an average exchange rate that closely approximates the rate in effect at the transaction date. Monetary assets and liabilities are adjusted to reflect the rate of exchange in effect at year-end. Exchange gains and losses are included in operations for the current year.

3. Cash and short-term deposits

	1991	1990
Cash (bank overdraft)	\$ (465 070)	\$ (659 105)
Short-term deposits		
Canadian banks	8 530 333	11 648 255
Commercial companies	6 754 895	—
Foreign-owned banks	2 074 156	2 151 598
Federal and Provincial governments	—	974 930
	<u>\$16 894 314</u>	<u>\$14 115 678</u>

4. Property and equipment

	1991			1990
	Cost	Accumulated amortization	Net	Net
Computer equipment	\$ 5 818 074	\$2 767 285	\$3 050 789	\$3 021 759
Office furniture and equipment	1 844 228	1 141 245	702 983	692 713
Leasehold improvements	1 303 313	518 161	785 152	988 617
Vehicles	984 160	571 597	412 563	636 771
Telephone system	833 577	753 387	80 190	137 979
	<u>\$10 783 352</u>	<u>\$5 751 675</u>	<u>\$5 031 677</u>	<u>\$5 477 839</u>

Amortization for the year amounted to \$1 374 701 (1990, \$1 322 278).

5. Endowment funds

In 1987, the estate of the late John Bene established a fund to provide a postgraduate fellowship in the field of social forestry. During the same year, a former member of the Board of Governors of the Centre established a fund for applied or mission-oriented research. Last year, the Centre received a contribution from the V International Conference on AIDS (acquired immune deficiency syndrome), which was used to establish a fund for the purpose of AIDS research in the Third World.

	<u>1991</u>	<u>1990</u>
Balance at the beginning of the year	\$433 475	\$165 441
Donations received	—	255 958
Interest income	48 816	22 076
Expenses	(189 250)	(10 000)
Balance at the end of the year	<u>\$293 041</u>	<u>\$433 475</u>
John Bene	\$161 006	\$160 170
Governor	19 267	17 201
AIDS	112 768	256 104
Total endowment funds	<u>\$293 041</u>	<u>\$433 475</u>

6. Accounts payable and accrued liabilities

	<u>1991</u>	<u>1990</u>
Accrued liabilities – projects	\$ 6 686 751	\$ 6 983 667
Accrued annual and other leave benefits	1 472 304	1 390 149
Other	2 066 772	2 930 009
	<u>\$10 225 827</u>	<u>\$11 303 825</u>

7. Contract research

Contract research relates to research conducted or managed by the Centre and to the V International Conference on AIDS organized by the Centre. These are funded by other international agencies, the Canadian International Development Agency (CIDA), and other federal government entities.

Contract research expenses of \$5 133 337 (1990, \$9 276 881) include \$4 681 921 (1990, \$2 909 740) expended on behalf of CIDA. In addition, the Centre received \$146 646 (1990, \$49 971) as an administration fee from CIDA, which is included in investment and other income.

Contract research current liabilities of \$650 181 (1990, \$1 426 291) include \$139 266 (1990, nil) related to AIDS activities. Contract research liabilities do not include any amounts related to CIDA activities (1990, \$1 043 422), rather receivables of \$264 676 related to contract research activities on behalf of CIDA have been included in accounts receivable in 1991.

8. Operating leases

The Centre has entered into various lease arrangements for office premises, equipment, and staff accommodation in Canada and in various countries. The total annual payments under such lease arrangements will be:

<u>Year ending March 31</u>	
1992	\$ 6 194 140
1993	5 500 868
1994	5 051 369
1995	5 005 147
1996	5 046 551
1997–2000	8 520 433
	<u>\$35 318 508</u>

9. Contractual commitments — project grants and program development

The Centre is committed to make payments up to \$105.2 million during the next 4 years subject to funds being provided by Parliament and subject to compliance by recipients with the terms of project agreements. The Centre has also submitted formal grant offers to prospective recipients totaling \$14.8 million and is awaiting acceptance of these offers.

Board of Governors

Janet M. Wardlaw*
Chairman of the Board of Governors
Guelph, Canada

Peter A. Larkin*
Vice-Chairman of the Board of Governors
Vancouver, Canada

Ivan L. Head
President and Chief Executive Officer
Ottawa, Canada
(Term expired 12 March 1991)

Anne-Claude Bernard-Bonnin*
Outremont, Canada

Albert J. Butros*
Amman, Jordan

Gelia T. Castillo
Laguna, Philippines
(Term expired 16 December 1990)

Umberto P. Colombo
Rome, Italy

Joan E. Foley*
Toronto, Canada

David A. Hamburg
New York, USA

Gerald K. Helleiner*
Toronto, Canada

Walter J. Kamba*
Harare, Zimbabwe

Alexander A. MacDonald*
Antigonish, Canada

Lucille Mair
Kingston, Jamaica

Marcel Massé
Hull, Canada

Robert C. McGinnis*
Winnipeg, Canada

Sadako Ogata
Tokyo, Japan
(Resigned 22 January 1991)

Jean-Guy Paquet*
Quebec, Canada

Marie-Josée Pinard
Montreal, Canada
(Term expired 22 July 1990)

Vulimiri Ramalingaswami
New Delhi, India

Xi Hui Da
Beijing, People's Republic of China
(Term expired 16 December 1990)

Clara Zomer*
San José, Costa Rica

* Executive committee

Officers of the Centre

Ivan L. Head

President

(Term expired 12 March 1991)

Raymond J. Audet

Vice-President, Resources

James Mullin

Vice-President, Program

(Acting President, 13 March to 15 April 1991)

Robert Auger

Secretary and General Counsel

Gerald R. Bourrier

Director, Fellowships and Awards

W. Douglas Daniels

Director, Planning and Evaluation

Antoine Hawara

Treasurer

Geoffrey C. Hawtin

Director, Agriculture, Food and Nutrition Sciences

David Nostbakken

Director, Communications

J. Allan Rix

Director, Human Resources

Karl Smith

Director, Health Sciences

Martha B. Stone

Director, Information Sciences

Mousseau Tremblay

Director, Earth and Engineering Sciences

Anne V.T. Whyte

Director, Social Sciences

Richard Wilson

Director, Health Sciences

(Resigned 5 December 1990)

Regional Directors

Daniel Adzei Bekoe

Eastern and Southern Africa (Nairobi)

L. Fernando Chaparro

Latin America and the Caribbean (Montevideo)

Jingjai Hanchanlash

Southeast and East Asia (Singapore)

Fawzy Kishk

Middle East and North Africa (Cairo)

Vijay G. Pande

South Asia (New Delhi)

Pierre Sané

West and Central Africa (Dakar)

Projects, fellowships, and publications

The details of the projects supported in 1990–1991, of the Fellowships awarded, and of the Publications supported by IDRC are listed in a supplement to the Annual Report. Copies are available through the Distribution Unit, Communications Division, IDRC, PO Box 8500, Ottawa, Canada K1G 3H9.

Projets, bourses et publications

Vous trouverez dans l'Annexe du Rapport annuel les renseignements sur les projets subventionnés, les bourses accordées et les publications financées en 1990-1991 par le CRDI. Vous pouvez l'obtenir auprès de la Section de distribution, Division des communications, CRDI, BP 8500, Ottawa, Canada K1G 3H9.

Cadres supérieurs

Ivan L. Head
Président
(Fin du mandat le 12 mars 1991)

Raymond J. Audet
Vice-président, Ressources

James Mullin
Vice-président, Programme
(Président intérimaire du 13 mars au 15 avril 1991)

Robert Auger
Secrétaire et Conseiller juridique

Gérald R. Bourrier
Directeur, Bourses

W. Douglas Daniels
Directeur, Planification et évaluation

Antoine Hawara
Trésorier

Geoffrey C. Hawlin
Directeur, Sciences de l'agriculture, de
l'alimentation et de la nutrition

David Nosibakken
Directeur, Communications

J. Allan Rix
Directeur, Ressources humaines

Karl Smith
Directeur, Sciences de la santé
(À compter du 6 décembre 1990)

Martha B. Stone
Directrice, Sciences de l'information

Moussseau Tremblay
Directeur, Sciences de la terre et du génie

Anne V.T. Whyte
Directrice, Sciences sociales

Richard Wilson
Directeur, Sciences de la santé
(Démission le 5 décembre 1990)

Directeurs régionaux

Daniel Adzei Bekoe
Afrique orientale et australe (Nairobi)

L. Fernando Chaparro
Amérique latine et Antilles (Montevideo)

Jingjai Hanchanlash
Asie du Sud-Est et de l'Est (Singapour)

Fawzy Kishk
Moyen-Orient et Afrique du Nord (Le Caire)

Vijay G. Pande
Asie du Sud (New Delhi)

Pierre Sané
Afrique centrale et occidentale (Dakar)

Le Conseil des gouverneurs

Janet M. Wardlaw*
Présidente du Conseil des gouverneurs
Guelph (Canada)
Peter A. Larkin*
Vice-président du Conseil des gouverneurs
Vancouver (Canada)
Ivan L. Head
Président du Centre
Ottawa (Canada)
(Fin du mandat le 12 mars 1991)
Anne-Claude Bernard-Bonin*
Ottremont (Canada)
Albert J. Butros*
Amman (Jordanie)
Gelia T. Casillo
Laguna (Philippines)
(Fin du mandat le 16 décembre 1990)
Umberto P. Colombo
Rome (Italie)
Joan E. Foley*
Toronto (Canada)
David A. Hamburg
New York (Etats-Unis)
Gerald K. Helleiner*
Toronto (Canada)
Walter J. Kamba*
Harare (Zimbabwe)
Alexander A. MacDonald*
Antigonish (Canada)
Lucille Mair
Kingston (Jamaïque)
Marcel Massé
Hull (Canada)
Robert C. McGinnis*
Winnipeg (Canada)
Sadako Ogata
Tokyo (Japon)
(Démisssion le 22 janvier 1991)
Jean-Guy Paquet*
Québec (Canada)

*Comité de direction

Marie-Josée Pinard
Montréal (Canada)
(Fin du mandat le 22 juillet 1990)
Vulimiri Ramalingaswami
New Delhi (Inde)
Xi Hui Da
Beijing (République populaire de Chine)
(Fin du mandat le 16 décembre 1990)
Clara Zomer*
San José (Costa Rica)

9. Engagements contractuels — Subventions et élaboration de projets

Le Centre s'est engagé à verser des subventions totalisant au plus 105,2 millions de dollars au cours des quatre prochains exercices, à condition que le Parlement du Canada mette les fonds nécessaires à sa disposition et à condition que les bénéficiaires se conforment aux modalités de subvention des projets. Le Centre a également offert de façon officielle des subventions à des bénéficiaires susceptibles de les recevoir, pour un montant total de 14,8 millions de dollars; il attend l'acceptation de ces offres.

Solde au début de l'exercice	\$433 475	1991	\$165 441	1990
Dons reçus	—		255 958	
Intérêts créditeurs	48 816		22 076	
Dépenses	(189 250)		(10 000)	
Solde à la fin de l'exercice	\$293 041		\$433 475	
John Bene	\$161 006		\$160 170	
Gouverneur	19 267		17 201	
SIDA	112 768		256 104	
Total des fondations	\$293 041		\$433 475	

6. Créditeurs et frais courus

Frais courus – projets	\$ 6 686 751	1991	\$ 6 983 667	1990
Prestations courues de congés annuels et autres	1 472 304		1 390 149	
Autres	2 066 772		2 930 009	
	\$10 225 827		\$11 303 825	

7. Contrats de recherche

Les contrats de recherche se rapportent à la recherche exécutée ou gérée par le Centre au nom d'autres organismes et à la V^e conférence internationale sur le SIDA, organisée par le Centre. Ces contrats sont financés par d'autres organismes internationaux, l'Agence canadienne de développement international (ACDI) et d'autres agences gouvernementales fédérales.

Les dépenses des contrats de recherche de \$5 133 337 (en 1990, \$9 276 881) comprennent \$4 681 921 (en 1990, \$2 909 740) déboursés au nom de l'ACDI. De plus, le Centre a reçu \$146 646 (en 1990, \$49 971) de frais d'administration de l'ACDI; ces frais sont inclus dans les intérêts sur placements et autres revenus.

Les éléments de passif à court terme afférents aux contrats de recherche s'élevaient à \$650 181 (en 1990, \$1 426 291) et comprennent \$139 266 (en 1990, nil) au titre des activités reliées au SIDA. Le passif relatif aux contrats de recherche n'inclut aucun montant lié aux activités de l'ACDI (en 1990, \$1 043 422) mais une créance de \$264 676 au titre des contrats de recherche pour le compte de l'ACDI a été inscrite dans les débiteurs en 1991.

8. Contrats de location-exploitation

Le Centre a conclu différents contrats de location pour des bureaux, du matériel et du logement pour le personnel tant au Canada que dans plusieurs autres pays. En vertu de ces contrats de location, les engagements annuels du Centre sont les suivants :

Exercice se terminant le 31 mars	
1992	\$ 6 194 140
1993	5 500 868
1994	5 051 369
1995	5 005 147
1996	5 046 551
1997-2000	8 520 433
	<u>\$35 318 508</u>

Charges de retraite

Les employés du Centre participent au Régime de pension de retraite de la Fonction publique administré par le gouvernement du Canada. L'employé et le Centre doivent cotiser au Régime. Ces cotisations représentent la totalité de la responsabilité du Centre et elles sont comptabilisées sur une base courante.

Impôts sur le revenu

Le Centre n'est pas assujéti à l'impôt sur le revenu.

Conversion des devises

La conversion des devises en dollars canadiens se fait selon un taux de change moyen qui est très près du taux de change en vigueur à la date de l'opération. L'actif et le passif monétaires sont réglés selon le taux de change en vigueur à la fin de l'exercice. Les gains et les pertes réalisés lors des opérations de change sont imputés aux résultats de l'exercice courant.

3. Encaisse et dépôts à court terme

	1991	1990
Encaisse (découvert bancaire)	\$ (465 070)	\$ (659 105)
Dépôts à court terme		
Banques canadiennes	8 530 333	11 648 255
Sociétés commerciales	6 754 895	—
Banques sous contrôle étranger	2 074 156	2 151 598
Gouvernements fédéral et provinciaux	—	974 930
	<u>\$16 894 314</u>	<u>\$14 115 678</u>

4. Immobilisations

	1991	1990
Matériel informatique	\$ 5 818 074	\$ 3 021 759
Mobilier et matériel	1 844 228	692 713
de bureau	1 303 313	988 617
Améliorations locales	984 160	636 771
Véhicules	833 577	137 979
Système téléphonique	753 387	80 190
	<u>\$5 751 675</u>	<u>\$5 031 677</u>
Amortissement cumulé	1 141 245	702 983
	518 161	785 152
	571 597	412 563
	<u>\$10 783 352</u>	<u>\$5 477 839</u>
Coût		Net

L'amortissement pour l'exercice s'établit à \$1 374 701 (en 1990, \$1 322 278).

5. Fondations

En 1987, la succession du regretté John Bene a créé une fondation qui doit être consacrée à l'octroi de bourses d'études supérieures en foresterie sociale. Durant la même année, un ancien Gouverneur du Centre a établi une fondation pour la recherche appliquée ou consacrée à remplir une mission particulière. L'année dernière le Centre a reçu une contribution provenant de la Ve conférence internationale sur le SIDA (syndrome d'immunodéficience acquise). Celle-ci a été versée dans un fonds pour la recherche sur cette maladie dans le Tiers-Monde.

Notes afférentes aux états financiers du 31 mars 1991

1. Pouvoirs et objectif

Le Centre de recherches pour le développement international est une société sans capital-actions, créée en 1970 par une loi du Parlement du Canada appelée la Loi sur le Centre de recherches pour le développement international. Le Centre a reçu une subvention annuelle du Parlement du Canada en conformité avec le crédit 60 et 50 du ministère des Affaires extérieures, ceci pour les exercices terminés les 31 mars 1991 et 1990 respectivement.

Le Centre a pour objectif d'entreprendre, d'encourager, de soutenir et de poursuivre des recherches sur les problèmes des régions du monde en développement et sur les moyens d'application et d'adaptation des connaissances scientifiques et autres au progrès économique et social de ces régions.

2. Principales conventions comptables

Les états financiers ont été préparés conformément aux principes comptables généralement reconnus au Canada, en accord avec les Normes comptables internationales, et traduisent les principales conventions suivantes :

Immobilisations

Les immobilisations sont comptabilisées au prix coûtant et sont amorties sur la durée estimative de leur utilisation. Les améliorations locatives sont amorties selon la durée des contrats de location respectifs. Les méthodes comptables et les taux annuels prévus pour l'amortissement des immobilisations sont les suivants :

Méthode		Taux (%)
Matériel informatique	Linéaire	20
Améliorations locatives	Linéaire	5-50
Mobilier et matériel de bureau	Linéaire	20
Véhicules	Solde dégressif	30
Système téléphonique	Linéaire	20

Comptabilisation des revenus

Les subventions du Parlement sont inscrites selon la méthode de la comptabilité d'exercice.

Les revenus tirés des contrats de recherche sont comptabilisés lorsque les dépenses afférentes sont engagées. L'excédent des fonds reçus pour les contrats de recherche sur les dépenses est inclus dans le passif à court terme.

Indemnités de cessation d'emploi courues

Les employés bénéficient de certaines indemnités de cessation d'emploi calculées selon le salaire au moment de la cessation et selon les conditions d'emploi. Le passif résultant de ces indemnités est comptabilisé au fur et à mesure que les montants s'accumulent au crédit de l'emploi.

Loyer reporté

Les gratuités ou autres avantages reliés à des contrats de location à long terme sont reportés et amortis selon la méthode linéaire sur la durée du contrat.

État de l'avoir du Canada
pour l'exercice terminé le 31 mars 1991

1991	1990
\$13 888 776	\$13 888 776
\$4 025 353	
Excédent des revenus sur les dépenses	
(dépenses sur les revenus)	
4 543 472	(9 863 423)
\$8 568 825	\$ 4 025 353
Solde à la fin de l'exercice	

État de l'évolution de la situation financière
pour l'exercice terminé le 31 mars 1991

1991	1990
Activités d'exploitation	
Encaisse provenant de (absorbée par) l'exploitation	
Excédent des revenus sur les dépenses	
(dépenses sur les revenus)	
\$ 4 543 472	\$ (9 863 423)
Éléments ne comportant aucun mouvement de fonds	
Amortissement des immobilisations	
Provision pour indemnités de cessation d'emploi	
Perte (gain) lors de l'aliénation d'immobilisations	
(121 724)	28 508
(304 917)	(304 917)
5 985 859	(8 514 412)
Variations de l'actif et du passif d'exploitation hors caisse	
Débiteurs	(152 203)
Frais payés d'avance	545 412
Dépôts recouvrables	(23 464)
Créditeurs et frais courus	(1 069 871)
Paiement d'indemnités de cessation d'emploi	(402 693)
Passif lié aux contrats de recherche courus	(1 106 037)
(2 400 408)	(2 208 856)
Encaisse provenant de (absorbée par) l'exploitation	(10 723 268)
Activités d'investissement	
Acquisitions d'immobilisations	(2 336 333)
Produit de l'aliénation d'immobilisations	278 192
(806 815)	(2 058 141)
Augmentation (diminution) de l'encaisse	(12 781 409)
Encaisse et dépôts à court terme au début de l'exercice	26 897 087
Encaisse et dépôts à court terme à la fin de l'exercice	\$14 115 678

État des résultats		pour l'exercice terminé le 31 mars 1991	
		1991	1990
DÉPENSES			
Recherche en développement			
Subvention de projets	\$ 56 382 561	\$ 63 424 558	
Projets du Centre	5 408 936	5 757 433	
Contrats de recherche (note 7)	5 133 337	9 276 881	
	66 924 834	78 458 872	
Activités reliées à la recherche			
Assistance technique	13 169 049	13 762 411	
Elaboration et financement de projets	5 739 734	6 683 451	
Diffusion de l'information	3 899 706	3 045 514	
Bibliothèque spécialisée en recherche et développement	1 723 452	1 765 694	
	24 531 941	25 257 070	
Soutien à la recherche opérationnelle			
Bureaux régionaux	8 047 720	8 728 412	
Gestion des divisions	6 976 142	7 378 419	
	15 023 862	16 106 831	
Total des dépenses de recherche et de soutien			
Dépenses d'administration	106 480 637	119 822 773	
	11 517 091	11 123 682	
	117 997 728	130 946 455	
REVENUS			
Subvention du Parlement du Canada	114 130 000	108 500 000	
Intérêts sur placements et autres revenus	3 277 863	3 306 151	
Contrats de recherche (note 7)	5 133 337	9 276 881	
	122 541 200	121 083 032	
EXCÉDENT DES REVENUS SUR LES DÉPENSES			
(DÉPENSES SUR LES REVENUS)	\$ 4 543 472	\$ (9 863 423)	

Etats financiers pour l'exercice terminé le 31 mars 1991

Bilan au 31 mars 1991

	1991	1990
ACTIF		
À court terme		
Encaisse et dépôts à court terme (note 3)	\$16 894 314	\$14 115 678
Débiteurs	1 409 170	1 040 856
Frais payés d'avance	882 017	849 248
19 185 501		16 005 782
Dépôts recouvrables	175 976	206 894
Immobilisations (note 4)	5 031 677	5 477 839
Fondations (note 5)	293 041	433 475
Total de l'actif	\$24 686 195	\$22 123 990

PASSIF		
À court terme		
Créditeurs et frais courus (note 6)	\$10 225 827	\$11 303 825
Fonds pour les contrats de recherche (note 7)	650 181	1 426 291
12 876 008		12 730 116
Indemnités de cessation d'emploi courues	2 941 320	2 623 128
Loyer reporté – Siège social	2 007 001	2 311 918
Fondations (note 5)	293 041	433 475
Total du passif	16 117 370	18 098 637
AVOIR		
8 568 825		4 025 353
Total du passif et de l'avoir	\$24 686 195	\$22 123 990
Engagements contractuels (note 9)		

Approuvé : le Président intérimaire

le Trésorier



AUDITOR GENERAL OF CANADA

VÉRIFICATEUR GÉNÉRAL DU CANADA

RAPPORT DU VÉRIFICATEUR

Au Centre de recherches pour le
développement international
et au
Secrétaire d'Etat aux Affaires extérieures

J'ai vérifié le bilan du Centre de recherches pour le développement international au 31 mars 1991 et les états des résultats, de l'avoir et de l'évolution de la situation financière de l'exercice terminé à cette date. La responsabilité de ces états financiers incombe à la direction du Centre. Ma responsabilité consiste à exprimer une opinion sur ces états financiers en me fondant sur ma vérification.

Ma vérification a été effectuée conformément aux normes de vérification généralement reconnues au Canada, en accord avec les Normes de vérification internationales. Ces normes exigent que la vérification soit planifiée et exécutée de manière à fournir un degré raisonnable de certitude quant à l'absence d'inexactitudes importantes dans les états financiers. La vérification comprend le contrôle par sondages des informations probantes à l'appui des montants et des autres éléments d'information fournis dans les états financiers. Elle comprend également l'évaluation des principes comptables suivis et des estimations importantes faites par la direction, ainsi qu'une appréciation de la présentation d'ensemble des états financiers.

À mon avis, ces états financiers présentent fidèlement, à tous égards importants, la situation financière du Centre au 31 mars 1991, ainsi que les résultats de son exploitation et l'évolution de sa situation financière pour l'exercice terminé à cette date selon les principes comptables généralement reconnus au Canada, en accord avec les Normes comptables internationales.

Le vérificateur général du Canada

L. Denis Desautels

L. Denis Desautels, FCA

Ottawa, Canada
le 3 juin 1991

Niveau des années-personnes

	1991-1992		1990-1991		1989-1990	
	Budget	Réalisations	Budget	Réalisations	Budget	Réalisations
DIVISIONS DE PROGRAMME	279,3	285,1	268,5	298,0	283,3	
Sciences de l'agriculture, de l'alimentation et de la nutrition	49,0	47,6	47,0	48,5	48,5	
Sciences sociales	42,0	44,0	42,2	48,0	43,3	
Sciences de l'information	36,6	38,6	34,2	42,5	35,5	
Personnel rattaché aux projets	36,4	36,4	37,2	36,5	39,4	
Sciences de la santé	33,0	35,0	30,0	36,0	34,1	
Sciences de la terre et du génie	17,0	17,0	13,6	18,0	17,0	
Communications	15,0	15,0	16,3	26,0*	24,3*	
Personnel rattaché aux projets	28,0	28,0	25,6	19,0*	18,3*	
Bourses	11,3	11,5	11,3	11,5	11,6	
Bureau de planification et d'évaluation	11,0	12,0	11,1	12,0	11,3	
ADMINISTRATION GÉNÉRALE	153,0	151,8	148,6	158,5	150,5	
Bureau du Trésorier	37,0	37,8	36,6	39,0	35,5	
Administration	34,0	34,0	33,0	35,0	32,9	
Bureau des ressources humaines	18,0	17,5	16,8	19,5	18,0	
Traitement électronique des données	16,0	16,0	16,2	14,0	15,4	
Bureau du Secrétaire et Conseiller juridique	15,0	15,0	14,9	17,0	16,2	
Bureau de direction	15,0	14,0	13,2	15,0	13,5	
Administration des bureaux régionaux	13,0	12,5	13,2	14,0	14,6	
Vérification interne	5,0	5,0	4,7	5,0	4,4	
DÉTACHEMENTS, CONGÉS D'ÉTUDES OU SABBATIQUES	3,0	3,0	1,2	3,0	1,5	
TOTAL : PERSONNEL ENGAGÉ AU SIÈGE	435,3	439,9	418,3	459,5	435,3	

* Réflète l'ancienne structure de la division.

Dépenses de recherche et de soutien pour l'exercice terminé le 31 mars 1991

	1991		1990	
	Recherche en développement	Activités reliées à la recherche	Soutien à la recherche opérationnelle	Total
PROGRAMMES				Total
Sciences de l'agriculture, de l'alimentation et de la nutrition	\$21 510 313	\$ 4 822 468	\$ 1 191 782	\$ 27 524 563
Sciences sociales	10 806 717	2 961 603	1 274 435	15 042 755
Sciences de la santé	10 154 987	2 901 744	1 019 398	14 076 129
Sciences de l'information	8 941 553	2 238 501	1 252 837	12 432 891
Sciences de la terre et du génie	6 820 729	1 188 471	584 233	8 593 433
Bourses	4 807 419	998 173	382 608	6 188 200
ACTIVITÉS RELIÉES AUX PROGRAMMES				
Bureaux régionaux	14 759	1 482 388	8 047 720	9 544 867
Division des communications	801 910	5 225 263	855 760	6 882 933
Activités des programmes spéciaux	3 066 447	458 063	—	3 524 510
Bibliothèque spécialisée en recherche en développement	—	1 723 452	—	1 723 452
Liaison et relations extérieures	—	531 816	415 089	946 905
	<u>\$66 924 834</u>	<u>\$24 531 942</u>	<u>\$15 023 862</u>	<u>\$106 480 638</u>
				<u>\$119 822 773</u>

Exposé financier sur cinq ans (000 \$)

	Réalizations				
	1991-1992	1990-1991	1989-1990	1988-1989	1987-1988

RÉSULTATS DES OPÉRATIONS

Revenus	\$121 950	\$122 541	\$121 083	\$121 293	\$112 417
Subvention du Parlement du Canada	115 000	114 130	108 500	114 200	108 100
Contrats de recherche	4 773	5 133	9 277	4 199	2 107
Placements et autres revenus	2 177	3 278	3 306	2 894	2 210
Dépenses	\$124 980	\$117 998	\$130 946	\$115 975	\$106 401
Activités de recherche pour le développement*	69 936	66 925	78 459	67 875	62 362
Activités reliées à la recherche	27 246	24 532	25 257	23 825	21 347
Aide opérationnelle à la recherche	15 930	15 024	16 106	14 388	12 329
Administration générale	11 868	11 517	11 124	9 887	10 363
Excédent des revenus sur les dépenses	\$ (3 030)	\$ 4 543	\$ (9 863)	\$ 5 318	\$ 6 016

ACTIVITÉS DE PROGRAMME

Affectations	\$131 426	\$112 707	\$115 677	\$141 265	\$124 904
Nouveaux projets†	89 750	72 997	74 685	103 659	89 685
Services techniques	13 878	13 169	13 762	13 330	12 527
Administration générale	11 868	11 517	11 124	9 887	10 363
Bureaux régionaux	8 301	8 048	8 728	7 177	5 828
Administration des divisions	7 629	6 976	7 378	7 212	6 501
Engagements	\$127 348	\$109 706	\$145 089	\$126 834	\$120 154
Projets‡	85 672	69 996	104 097	89 228	84 935
Services techniques	13 878	13 169	13 762	13 330	12 527
Administration générale	11 868	11 517	11 124	9 887	10 363
Bureaux régionaux	8 301	8 048	8 728	7 177	5 828
Administration des divisions	7 629	6 976	7 378	7 212	6 501
Engagements en cours	\$104 724	\$105 200	\$116 100	\$104 400	\$ 96 000

* Incluant les contrats de recherche.
† Incluant les projets préliminaires des divisions.
‡ Excluant les contrats de recherche (projets spéciaux).

Faits saillants financiers (000 \$)

Écart en pourcentage 1990-1991 vs 1989-1990	Réalisations 1989-1990	Budget 1989-1990	Budget 1990-1991	Réalisations 1990-1991	Budget 1990-1991
	(% de variation)				

OPÉRATIONS FINANCIÈRES

Revenus	\$118 530	\$122 541	3,4	\$121 083	1,2
Subvention du Parlement du Canada	114 130	114 130	0,0	108 500	5,2
Contrats de recherche	3 000	5 133	71,1	9 277	-44,7
PlACEMENT ET AUTRES REVENUS	1 400	3 278	134,1	3 306	-0,8
Dépenses	\$118 413	\$117 998	0,4	\$130 946	-9,9
Projets en cours	49 943	49 734	0,4	54 450	-8,7
Nouveaux projets*	28 438	28 554	-0,4	35 504	-19,6
Services techniques	13 405	13 169	1,8	13 762	-4,3
Administration générale	11 500	11 517	-0,1	11 124	3,5
Bureaux régionaux	7 780	8 048	-3,4	8 728	-7,8
Administration des divisions	7 347	6 976	5,0	7 378	-5,4
Excédent des revenus sur les dépenses (des dépenses sur les revenus)	\$ 117	\$ 4 543	—	\$ (9 863)	-146,1

ACTIVITÉS DE PROGRAMME

Affectations	\$113 032	\$112 707	0,3	\$115 678	-2,6
Nouveaux projets	73 000	72 997	0,0	74 686	-2,3
Services techniques	13 405	13 169	1,8	13 762	-4,3
Administration générale	11 500	11 517	-0,1	11 124	3,5
Bureaux régionaux	7 780	8 048	-3,4	8 728	-7,8
Administration des divisions	7 347	6 976	5,0	7 378	-5,4
Engagements	\$113 965	\$109 706	3,7	\$145 089	-24,4
Projets	73 933	69 996	5,3	104 097	-32,8
Services techniques	13 405	13 169	1,8	13 762	-4,3
Administration générale	11 500	11 517	-0,1	11 124	3,5
Bureaux régionaux	7 780	8 048	-3,4	8 728	-7,8
Administration des divisions	7 347	6 976	5,0	7 378	-5,4

* Incluant les contrats de recherche et les projets préliminaires des divisions.

circunstancias. La dirección assume igualmente la responsabilidad de todas las
 otras informaciones contenidas en el informe anual, que concuerdan, si y a
 su vez, con las contenidas en los estados financieros. Para bien se adquiere de
 esta responsabilidad, la dirección se apoya en los métodos y los sistemas de
 control financiero y gerencial que garantizan, de una manera razonable,
 la fiabilidad de las informaciones financieras, la protección de los bienes y la
 ejecución de las actividades. El CRDI a un departamento de verificación interna
 donde las funciones comprenden la revisión periódica de los mecanismos
 internos de control y su aplicación.

El Consejo de gobernadores es el encargado de asegurar que la dirección
 asuma sus responsabilidades en materia de comunicación de la información
 financiera y de control interno. El le hace por el compromiso del Comité de
 finanzas y de la verificación, donde los miembros no son empleados del
 CRDI. El comité encuentra regularmente la dirección, los verificadores
 internos y los verificadores externos.

El Verificador general del Canadá hace un examen independiente de los
 financieros conforme a las normas de verificación generalmente reconocidas
 y da su opinión sobre los estados. Su examen comprende la ejecución de
 sondeos y la aplicación de métodos que le autorizan a hacer un estado de la
 justificación de la presentación de los estados financieros. El Comité de finanzas y de
 la verificación del Consejo es el responsable de la verificación de los verificadores externos.

rapport aux prévisions et aux dépenses sur les projets inférieures au budget. On prévoit qu'à la fin de l'exercice 1991-1992, l'avoir du Canada redescendra à 5,5 millions de dollars.

Années-personnes

En 1990-1991, les années-personnes du siège social ont totalisé 418,3 par rapport aux 439,9 prévues au budget. Les vacances de postes se sont réparties entre les services techniques, l'administration des divisions et l'administration générale. En 1991-1992, le budget prévoit que le nombre des années-personnes au siège devrait être réduit à 435,3. Le nombre réel devrait être inférieur à ce chiffre à cause des postes qui seront abolis et ceux qui ne seront pas comblés durant l'année.

Affectations

Les affectations totales du CRDI en 1990-1991 ont été de 112,7 millions de dollars, en baisse de 2,6 % par rapport aux 115,7 millions de dollars de l'exercice précédent. Cette somme comprend 73,0 millions de dollars affectés à de nouveaux projets, soit 64,8 % des affectations totales de l'année. La figure 3 illustre les affectations de programme par région géographique.

En 1991-1992, les affectations totales devraient atteindre 131,4 millions de dollars. De ce montant, 89,8 millions de dollars, ou 68,3 % seront réservés aux programmes.

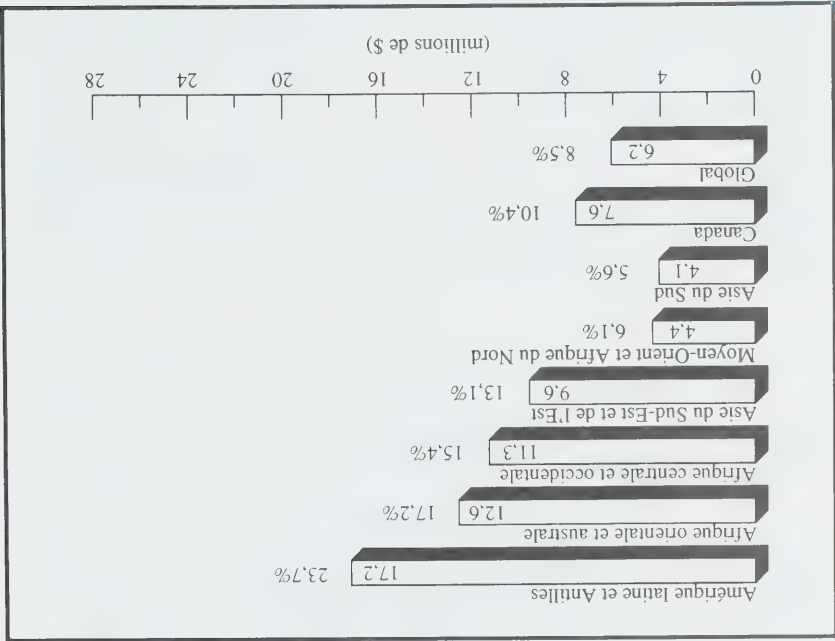


Figure 3. Affectations réalisées en 1990-1991 par région.

Responsabilité en matière d'états financiers

Les états financiers ont été préparés par la direction conformément aux principes comptables généralement reconnus qui conviennent dans les

Des dépenses de 8,3 millions de dollars sont prévues pour les bureaux régionaux dans le budget de 1991-1992, ce qui représente une augmentation de 3,1 % par rapport aux dépenses de 1990-1991.

Administration des divisions

Les dépenses d'administration des divisions se sont élevées à 7,0 millions de dollars en 1990-1991, soit une diminution de 5,5 % par rapport à l'année précédente, et ont représenté 5,9 % des dépenses totales du Centre en 1990-1991.

Il est prévu que les dépenses à ce chapitre augmenteront de 9,4 % par rapport à 1990-1991 pour atteindre le montant de 7,6 millions de dollars.

Administration générale

Afin d'opérer de façon efficace, le CRDI se doit d'assumer toute une gamme de fonctions relatives aux politiques, à la direction, à l'administration et aux services. Ces fonctions sont remplies par le Conseil des gouverneurs, le Bureau de direction, le Bureau du secrétaire et conseiller juridique, le Bureau du trésorier, le Bureau des ressources humaines et les départements de l'administration, du traitement électronique des données et de la vérification interne.

Les dépenses d'administration générale ont atteint 11,5 millions de dollars, en hausse de 3,5 % par rapport à l'exercice précédent (voir le tableau 2).

La part des dépenses totales que représente l'administration a connu une hausse par rapport à 1989-1990 en passant de 8,5 % à 9,8 %. Ceci s'explique par le fait que cette catégorie de dépenses comprend plusieurs coûts fixes tels que locaux et amortissement, qu'on ne peut éliminer dans un court laps de temps lorsque des mesures rapides sont nécessaires.

Il est prévu que les coûts d'administration augmenteront de 3,1 % en 1991-1992, soit un accroissement de 0,4 million de dollars.

Tableau 2. Dépenses d'administration générale pour l'exercice terminé le 31 mars 1991.

	1991	1990
Traitements et prestations	\$6 891 464	\$6 505 670
Locaux	1 890 128	1 806 255
Dépenses de bureau et divers	1 150 941	1 185 650
Déplacements et déménagements	209 218	248 310
Réunions des gouverneurs	247 432	308 621
Amortissement	478 441	416 267
Services professionnels et spéciaux	278 663	366 521
Télécommunications	250 719	237 043
Dépenses de groupes de travail	63 889	8 064
Assurances	56 196	41 281
	\$11 517 091	\$11 123 682

Avoir du Canada

L'avoir du Canada qui était de 4,0 millions de dollars à la fin de l'exercice précédent se chiffre à 8,6 millions de dollars au 31 mars 1991. Cette augmentation est due à un excédent des revenus de placement par

En 1990-1991, les dépenses reliées aux activités de recherche au service de développement se sont élevées à 66,9 millions de dollars ou 56,7 % des dépenses totales du Centre. Les dépenses pour les projets en cours, qui comprennent principalement des dépenses de recherche au service du développement, ont baissé de 8,7 % par rapport aux dépenses réelles de 1989-1990. Pour leur part, les dépenses sur les nouveaux projets ont diminué de 19,6 % en regard de l'année précédente.

Cette réduction importante des dépenses avait été prévue au moment de la préparation des budgets. Elle n'en demeure pas moins très significative. Elle résulte principalement de la réduction de la subvention du Parlement en 1989-1990 qui nous a forcés à diminuer les affectations de l'année dernière et dont les effets sur les dépenses se font sentir cette année. Elle est également causée par une baisse des dépenses reliées aux contrats à forfait. On prévoit cependant un accroissement de 4,5 % pour les activités de recherche au service du développement de l'an prochain.

Activités reliées à la recherche

Les activités reliées à la recherche comprennent les services techniques, les petits projets qui permettent d'élaborer des projets de recherche et les activités ayant trait à la diffusion de l'information ou à l'application des résultats de la recherche. Ces activités permettent également de maintenir une bibliothèque spécialisée en recherche au service du développement, qui desservent le milieu canadien du développement et le personnel du CRDI, et de mettre sur pied des activités restreintes de soutien aux programmes du CRDI. Les dépenses pour cette catégorie se sont élevées à 24,5 millions de dollars en 1990-1991 ou 20,8 % des dépenses totales du Centre. Ceci représente une baisse de 2,9 % par rapport à l'année précédente.

Les dépenses au titre des services techniques comprennent le coût du personnel de programme dont le rôle est d'aider à l'élaboration de nouveaux projets, de suivre les projets de recherche en cours et de fournir une assistance technique aux bénéficiaires. En 1990-1991, les dépenses de services techniques ont été de 13,2 millions de dollars, en baisse de 4,3 % par rapport à l'année précédente. Ces dépenses représentent 11,2 % des dépenses totales du CRDI.

En 1991-1992, on prévoit augmenter les sommes consacrées aux

activités reliées à la recherche de 2,7 millions de dollars ou 11,1 %.

Cependant, les services techniques, qui font partie de cette catégorie, connaîtront une augmentation plus faible de 0,7 million de dollars ou 5,4 %.

Bureaux régionaux

Les six bureaux régionaux jouent un rôle important pour accroître l'efficacité du Centre dans le soutien des projets de recherche dans les pays en développement. Ils permettent de maintenir de meilleurs contacts avec les bénéficiaires des subventions et de mieux répondre aux besoins du Tiers-Monde. Ces bureaux sont situés en Égypte, en Inde, au Kenya, au Sénégal, à Singapour et en Uruguay. Le coût total de fonctionnement de ces bureaux en 1990-1991 a été de 8,0 millions de dollars, soit une diminution de 7,8 % par rapport à 1989-1990. Cette baisse est attribuable principalement au fait que l'année précédente avait été marquée par une dépense exceptionnelle reliée au déplacement du bureau de Bogotá à Montevideo.

Pour 1991-1992, on prévoit un revenu total de 122,0 millions de dollars, soit une baisse de 0,5 % par rapport à 1990-1991.

Dépenses

Durant l'année fiscale 1990-1991, les dépenses totales se sont élevées à 118,0 millions de dollars, soit une diminution de 12,9 millions de dollars ou 9,9 % par rapport à l'exercice précédent. La figure 2 illustre le pourcentage de chaque catégorie de dépenses en 1990-1991.

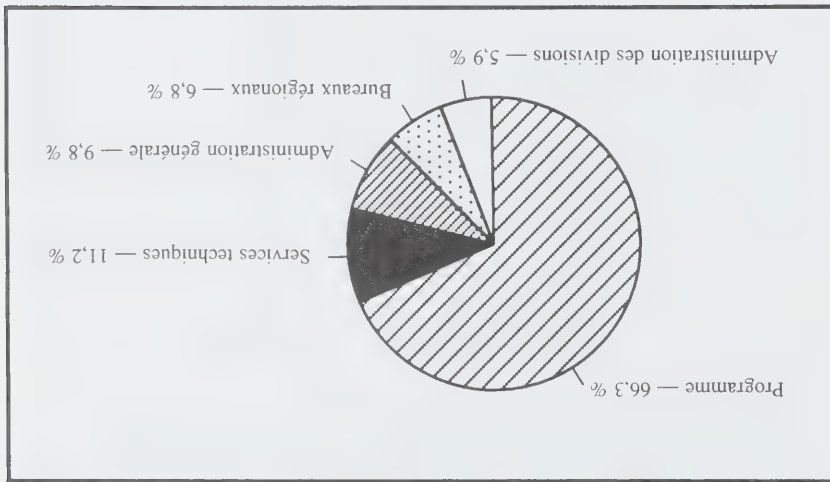


Figure 2. Ventilation des dépenses réalisées en 1990-1991.

Le tableau 1 compare les dépenses prévues (budget) pour 1991-1992 et les dépenses réelles (réalisations) en 1990-1991 et au cours des trois années précédentes (en millions de dollars et en pourcentage du total de l'année).

Activités de recherche au service du développement

Les activités de recherche au service du développement reflètent les coûts directs de tous les projets de recherche scientifique et technique financés par le CRDI dans les pays en développement. Elles sont la raison d'être du Centre. Cette catégorie de dépenses comprend les rubriques suivantes : les projets identifiés, élaborés et administrés par des chercheurs des pays en développement; les projets du CRDI et des réseaux inter-nationaux de recherche; et les projets de recherche à forfait administrés pour le compte d'autres organismes subventionnaires.

Tableau 1. Dépenses de 1987-1988 (réalisations) à 1991-1992 (budget).

Budget		Réalisations	
1991- % du	1992- total	1990- % du	1989- total
Activités de recherche pour le développement			
\$ 69,9	55,9	\$ 66,9	56,7
\$125,0	100,0	\$118,0	100,0
Activités reliées à la recherche			
27,2	21,8	24,5	20,8
11,9	9,5	11,5	9,8
8,3	6,7	8,0	6,8
7,6	6,1	7,0	5,9
Bureaux régionaux			
5,5	4,4	5,1	4,3
5,8	4,7	5,4	4,6
6,0	4,9	5,6	4,8
Administration des divisions			
58,6	46,4	56,0	46,5
\$106,4	100,0	\$116,0	100,0
Total			
213	172	213	172
20,0	16,3	20,0	16,3
9,8	8,0	9,8	8,0
6,0	4,9	6,0	4,9
6,5	5,3	6,5	5,3
6,0	4,9	6,0	4,9
58,6	46,4	56,0	46,5
\$ 62,4	50,3	\$ 62,4	50,3
\$106,4	100,0	\$106,4	100,0

pendant quelques années. De leur côté, les dépenses pour les projets existants et pour les nouveaux projets ont été inférieures aux prévisions en 1990-1991. C'est ainsi que l'année se termine avec un excédent des revenus sur les dépenses de 4,5 millions de dollars alors que l'année précédente s'était soldée par un déficit de 9,9 millions de dollars.

La situation financière du CRDI lui permettra donc d'absorber en partie le choc de la baisse de l'octroi prévue en 1991-1992. Il est à noter que cette baisse arrive au moment où le Centre est en train de mettre en place sa nouvelle stratégie. Celle-ci devra tenir compte des projections pour la subvention du Parlement des années à venir. Parallèlement à la réduction des dépenses durant l'année 1990-1991, le Centre a diminué le nombre d'années-personnes au siège social afin de ne pas affecter de façon significative ses ratios de performance. Il est prévu que le nombre d'années-personnes continue à diminuer en 1991-1992 et en 1992-1993.

Revenus

Le revenu total du CRDI a été légèrement supérieur à celui de l'an dernier et se chiffrait à 122,5 millions de dollars. Les revenus comprennent la subvention du Parlement de 114,1 millions de dollars, des revenus de 3,3 millions de dollars provenant de placements et d'autres sources ainsi que des revenus de contrats de recherche de 5,1 millions de dollars. La figure 1 illustre la tendance des revenus au cours des quatre dernières années et l'année à venir.

Les variations des trois composantes des revenus par rapport à l'an dernier ont été très différentes l'une de l'autre. La subvention du Parlement pour 1990-1991, d'un montant de 114,1 millions de dollars, représente une augmentation de 5,6 millions de dollars (5,2 %) par rapport à l'exercice précédent. Le montant de 3,3 millions de dollars provenant de placements et d'autres sources de revenus est le même que l'an dernier mais a été supérieur à l'objectif prévu de 0,9 million de dollars. Enfin, les revenus de contrats à forfait ont diminué de 4,2 millions de dollars (-44,7 %) par rapport à l'exercice précédent. Ceci est dû au fait que l'exercice précédent comprenait la V^e Conférence internationale sur le SIDA. Ces revenus mis à part, les revenus de contrats à forfait ont augmenté de 2,2 millions de dollars (75,9 %).

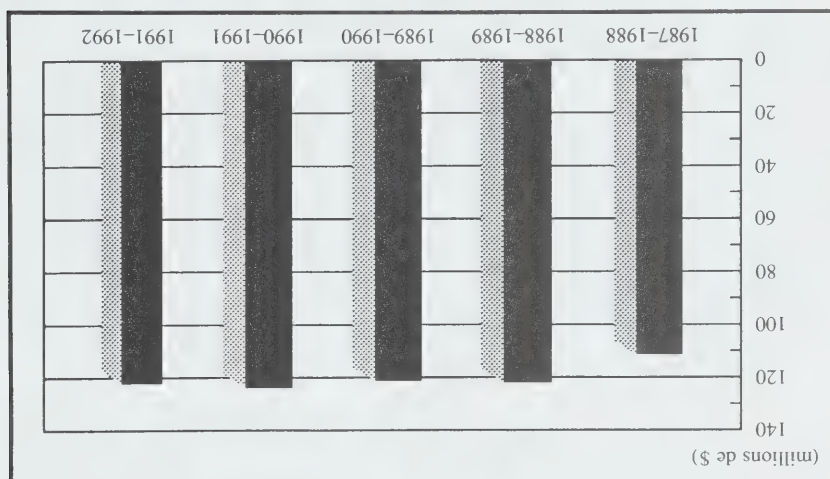


Figure 1. Revenu total du CRDI de 1987-1988 (réalisations) à 1991-1992 (budget).

Exposé financier et faits saillants

Au cours de l'exercice 1990-1991, le CRDI a fait l'objet d'importantes pressions externes et internes qui ont découlé des modifications apportées aux recettes prévues. De nouveau, les budgets d'exploitation du Centre et sa planification à long terme en matière de ressources ont dû être entièrement révisés en fonction des dernières prévisions des niveaux de recettes. Après plusieurs années de croissance des recettes, il est maintenant évident que le CRDI entre dans une période où les ressources seront rares et qu'il devra s'efforcer d'accroître son efficacité et son efficience tout en tenant pleinement compte de l'économie.

Le défi que doit relever la direction du Centre consiste non seulement à faire face aux prévisions à la baisse quant au montant de la subvention mais aussi à poursuivre les efforts qu'elle fait actuellement pour augmenter le pourcentage des fonds consacrés aux activités de programme par rapport à celui des activités d'exploitation. À l'heure actuelle, la proportion du budget affecté aux programmes est de 77 contre 23 pour les dépenses d'opération. Le défi des deux années qui viennent de s'écouler est également celui des trois prochaines années, c'est-à-dire de ramener les coûts d'exploitation du siège social et des bureaux régionaux à un niveau correspondant à 20 % des dépenses totales. Ce défi sera difficile à relever et donnera lieu à des sacrifices et à des décisions douloureuses, mais la direction du CRDI est fermement décidée à atteindre un ratio programme/dépenses d'exploitation de 80/20 d'ici à l'exercice 1994-1995.

Ces deux dernières années, d'importantes mesures ont été prises pour réduire les dépenses d'exploitation, dont la réduction de la taille des bureaux régionaux du CRDI au Caire et à New Delhi, qui a entraîné la réinjection de tous les administrateurs de programme de ces deux bureaux. Mentionnons également la réduction des effectifs, du niveau approuvé de 462 postes, qui figurait dans le Plan opérationnel bisannuel 1990-1991 et 1991-1992 présenté au Conseil des gouverneurs en mars 1990, à un objectif approuvé de 429 postes, une réduction équivalente à 7 %.

Les réductions budgétaires précitées ont été réalisées tout en poursuivant l'effort d'informatisation de manière à maintenir la productivité. Le CRDI est désormais relié électroniquement à tous ses bureaux et l'objectif d'un micro-ordinateur par employé ayant à s'en servir régulièrement a été atteint. Le siège social et le bureau régional situé à Singapour ont maintenant leur réseau local et des plans ont été mis de l'avant pour en doter le bureau régional de Montevideo en 1991-1992.

Le CRDI avait déjà décidé de procéder à un important examen de ses coûts d'exploitation dans le but de les réduire; un incitatif supplémentaire vient de lui être donné en ce sens, le Conseil du Trésor lui ayant demandé de se conformer aux restrictions salariales et aux mesures en matière de gestion qu'a annoncées le ministre des Finances dans son budget du 26 février 1991. En outre, en avril 1991, le CRDI a appris que son budget serait réduit de 8,0 millions de dollars suite au réaménagement des dépenses de l'APD (Aide publique au développement). L'impact de cette réduction était encore inconnu au moment de la rédaction de ce rapport mais il en résultera sans doute une diminution de la taille de l'organisme.

La subvention du Parlement pour 1990-1991 est légèrement inférieure à celle que le CRDI avait reçue en 1988-1989, soit 2 ans auparavant. De plus, il est prévu qu'elle ne s'accroisse que de 0,8 % en 1991-1992. En termes réels (dollars constants), le CRDI se doit donc de constater que sa subvention est effectivement en baisse et que cette situation risque d'être maintenue

Pendant une bonne partie des années 1980, les pays du Cône Sud de l'Amérique latine ont été dirigés par des dictatures militaires qui s'opposaient fermement à l'exécution de recherches dans le domaine des sciences sociales, et il a incombé à des organismes subventionnaires étrangers, dont le CRDI, d'appuyer les groupes de chercheurs dans ce domaine qui avaient choisi de rester dans leur pays et ce, malgré les risques qu'ils couraient. Avec l'arrivée au pouvoir de gouvernements démocratiques dans la région, bon nombre de ces chercheurs sont maintenant à la tête de ministères et occupent des postes où ils peuvent mettre en application les résultats des travaux de recherche qu'ils ont exécutés. Plusieurs ministres de premier plan du gouvernement Aylwin, au Chili, et du gouvernement Alfonsín, en Argentine, ont été

Conclusion

subventionnés par le CRDI lorsque leur pays était sous régime militaire.

Mise en réseau, recherche multidisciplinaire, renforcement institutionnel et utilisation des résultats de la recherche, voilà certaines des préoccupations qui constituent le «cadre stratégique» des politiques et pratiques que le CRDI cherche à mettre en place par le financement de la recherche dans l'ensemble des pays en développement. Il ne s'agit là que d'un échantillon des sujets qui figurent sur la liste plus longue des préoccupations qui sous-tendent ses efforts en vue d'accroître sa propre compréhension du processus de la *Recherche au service du développement*.

activités du CRDI dans le domaine des sciences sociales ont pour but explicite d'influencer l'orientation et le contenu des politiques gouvernementales; les moyens pris pour y arriver peuvent différer sensiblement puisqu'ils sont fonction de la réceptivité des gouvernements visés aux conseils.

En ce qui concerne le Consortium pour la recherche économique en Afrique, on a recours à un moyen simple : on demande aux groupes de recherche qui souhaitent obtenir des fonds de compter parmi leurs membres un représentant officiel approprié d'une banque centrale ou d'un ministère des Finances. L'on n'obtient pas ainsi la garantie que le gouvernement donnera suite aux conseils qui émaneront de la recherche, mais cela représente tout de même une amélioration considérable puisqu'on a l'assurance que le gouvernement est au courant des conclusions de la recherche et que les chercheurs sont au courant des contraintes qui limitent la capacité d'agir du gouvernement.

S'il s'agit là de problèmes difficiles dans les pays industrialisés, ils sont encore bien moins compris dans les pays en développement. Il est essentiel d'avoir une meilleure compréhension de ces liens et, pour répondre à ce besoin, le CRDI s'est engagé, avec ses bénéficiaires, dans une série d'«expériences» visant à promouvoir l'«utilisation» et, par l'intermédiaire de ses bureaux régionaux, amorcé une série de consultations régionales portant sur les liens entre les universités de certains pays en développement et le secteur de la production dans ces pays⁴⁵.

Étant donné que le CRDI subventionne des recherches dans une vaste gamme de disciplines, dont les résultats visent un éventail encore plus vaste d'utilisateurs éventuels, les approches adoptées ont varié considérablement. Plusieurs des

4. *Case Studies on Indigenous Industrial R&D Utilization*, N.C.B. Nair et Lokesh Misra, IDRC-MR188e, 1988, 297 p.

5. *Universities and application of research results, proceedings of a workshop*, Singapore, 1988. Corazon Azucena, rédactrice, non publié, 124 p.

recherche économique en Afrique (CREA) était institué, avec un rayon d'action s'élargissant à la recherche macro-économique dans les pays de l'Afrique subsaharienne, y compris certains pays francophones. (Un autre réseau, appuyé par le CRDI, était créé dès l'année suivante pour assister la recherche économique dans la sphère de la francophonie africaine.) Onze organismes contribuent aujourd'hui au budget annuel du Consortium, qui excède 1 million de dollars. Par l'apport convergent de plusieurs organismes donateurs, le CREA a permis d'éviter la dispersion des efforts, de réduire les frais administratifs et de donner aux économistes africains la possibilité de jouer un rôle de premier plan dans l'établissement des priorités de recherche. En 1990, le Consortium a financé 41 projets dont la plupart se concentraient sur les questions afférentes à la balance des paiements et à la gestion des finances nationales. En 1991, l'effort sera élargi à d'autres aspects de la vie économique, tels que la politique fiscale et la gestion de la dette.

À la différence des universités d'Amérique latine qui, en matière d'élaboration de politiques, oeuvrent souvent en étroite collaboration avec les instances gouvernementales, les universités africaines n'ont, historiquement, exercé que peu d'influence sur les orientations publiques. Afin de

À une autre occasion, plusieurs économistes bénéficiant du soutien du CREA ont participé à un colloque sur la stratégie de la recherche organisé sous l'égide de l'Association africaine des banques centrales et tenu en avril 1990. Les directeurs des banques centrales et des instituts de recherche ont tellement été impressionnés par les connaissances des économistes et leurs compétences qu'ils ont proposé à plusieurs d'entre eux de s'associer aux recherches entreprises par leurs institutions.

Fort du soutien des organismes subventionnaires, d'un éventail de publications à son actif et de projets pour une formation de troisième cycle en science économique, le CREA entre maintenant dans sa deuxième phase. L'idée lancée par le CRDI en 1983 a germé et sera bénéfique pour les économies d'Afrique.

S'il n'est pas facile de rassembler tous ces éléments dans un pays industrialisé, y parvenir dans un pays en développement, et en particulier dans certains des pays les plus pauvres, représente un formidable défi, mais un défi qu'il importe de relever. Ces deux dernières années, le CRDI a conclu des ententes avec trois universités d'Afrique subsaharienne (l'Université Makerere, en Ouganda, et les universités nationales du Bénin et du Mozambique), dans le cadre desquelles il se joint à ces dernières pour établir des facultés ou des programmes dans le domaine de la santé publique. Dans les trois cas, on s'attend à des programmes d'aide à long terme, qui devront comprendre la formation de personnel médical et non médical et s'attaquer à la définition des programmes d'études et de recherche.

Application des résultats de la recherche

Tant les pays industrialisés du Nord que les pays en développement du Sud savent parfaitement

Pour tracer les voies d'une saine gestion économique en Afrique

Au cours des 20 dernières années, la plupart des pays du monde ont connu une augmentation de leurs recettes et de hauts niveaux de production. Durant la même période, les pays africains, déjà sujets à une pauvreté endémique, n'ont cessé de s'appauvrir. S'il est partiellement dû à des facteurs externes, tels que la détérioration des termes de l'échange et la compression de l'aide extérieure, le déclin des économies africaines est aussi attribuable à des problèmes structurels découlant des faiblesses de la gestion et de la dépendance vis-à-vis des exportations primaires. Mais on pourrait également mettre en cause les politiques économiques inadéquates — surévaluation des taux de change, carence des investissements et distorsion des systèmes incitatifs à la production alimentaire et industrielle. Peu de gouvernements africains bénéficiaient, dans le passé, de conseils d'économistes avisés et peu ont volontiers calqué leur politique économique sur l'expérience d'autres pays, y compris sur les structures économiques des pays industrialisés, très dissimilaires des leurs.

Déjà en 1983, le CRDI entreprenait de contribuer à améliorer les compétences des économistes africains par la création du *Programme d'analyse macro-économique pour l'Afrique*

que le seul fait de financer des travaux de recherche ne suffit pas à assurer l'utilisation, dans la pratique, des connaissances qui découlent de ces travaux. Dans le Nord, on estime généralement que les travaux de recherche effectués au sein d'une entreprise sont plus susceptibles d'être exploités que ceux qui sont exécutés dans d'autres milieux institutionnels et ce, parce qu'on présume que l'entreprise est au diapason des besoins du «marché». Cependant, dans les écrits sur les politiques scientifiques publiés dans les pays industrialisés au cours des deux dernières décennies au moins, on s'attaque au problème de l'établissement de liens entre les résultats des recherches effectuées tant dans les laboratoires gouvernementaux que dans les universités et le secteur de la production. À l'heure actuelle au Canada, les liens entre l'université et l'industrie occupent toujours une place prépondérante dans les politiques ministérielles³.

3. Se reporter, par exemple, à *Comment accéder à la recherche universitaire. L'expérience des entreprises canadiennes*, J. André Potworowski, IDRC-MR210F, 1989, 100 p.

orientale et australe. Implantée à Nairobi, le programme a apporté un concours financier aux recherches de politique économique et mis à la disposition des spécialistes en sciences économiques africains toute une gamme de services de soutien prévoyant des rencontres et l'accès à des publications et aux conseils de personnes-ressources informées. C'était la première fois que des économistes africains avaient l'occasion de voir leur travail révisé par des pairs et d'entrer en contact avec des chercheurs engagés dans le même domaine de recherche. Initialement, le CRDI avait patronné de manière ponctuelle des études macro-économiques, sans atteindre à l'efficacité escomptée. Les économistes africains évoluaient en vase clos, n'avaient pas accès à la littérature essentielle, travaillaient sous surveillance minimale et ne pouvaient avoir des échanges qu'avec un nombre restreint de collègues. La formation reçue dans les universités d'outre-mer commençait à se déprécier des leur retour au pays.

En 1987, le *Programme d'analyse macro-économique* avait acquis ses lettres de noblesse, au point que la Banque mondiale, la United States Agency for International Development (USAID) et la Fondation Rockefeller s'associeraient au financement de son expansion. Ainsi, le Consortium pour la

Les actions concertées de ce genre, auxquelles participent plusieurs organismes subventionnaires, sont relativement plus courantes depuis quelques années. Plus on se familiarisera avec ce type de mécanisme de coordination, plus il se répandra, espère-t-on, et permettra d'offrir une meilleure forme de soutien aux milieux de la recherche dans les pays en développement.

Il arrive également parfois que des consortiums d'organismes subventionnaires soient formés pour susciter des débats publics, partout dans le monde, sur des questions importantes. La Commission sur la recherche en santé au service du développement, qui a été créée et financée par un consortium d'organismes subventionnaires publics et privés d'Amérique du Nord et d'Europe, est un exemple de ce type d'initiatives. Son rapport final² a mis de l'avant un programme de suivi axé sur la définition de «programmes nationaux de recherche essentielle en santé» dans un nombre croissant de pays en développement. Ce programme de suivi est administré conjointement, au nom des organismes faisant partie du consortium, par le CRDI et l'Agence suédoise de coopération en recherche avec les pays en développement (SAREC).

Renforcement institutionnel

Depuis sa création, en 1970, le CRDI poursuit un double objectif : appuyer la recherche appliquée et, en même temps, chercher à renforcer la capacité des pays en développement d'exécuter leurs propres programmes de recherche. Une grande partie des efforts antérieurs du Centre dans le domaine de la création de compétences ont été axés sur la formation et le perfectionnement des chercheurs. Plus récemment, cependant, une attention croissante a été accordée à la nécessité de renforcer les institutions de recherche au sein desquelles les chercheurs sont appelés à travailler. Pour assurer le bon fonctionnement d'un centre de recherche, il faut plus qu'un effectif de scientifiques ou d'universitaires dûment formés, il faut avoir accès à l'information, disposer, à l'administration et aux finances, d'un personnel qui est familier avec le genre de milieu permettant de stimuler la créativité et pouvoir compléter sur une direction capable de définir des objectifs et d'apporter la cohérence nécessaire au programme de l'institution sans freiner l'innovation.

À titre de comparaison, si les États-Unis consacrent environ 120 milliards de dollars américains par année à la recherche et au développement, on estime, dans une étude commandée par le CRDI³, que les sommes totales octroyées à l'aide à la recherche ont été, en 1984, de l'ordre de 1,3 à 1,4 milliard de dollars américains.

Considérés dans leur ensemble, les besoins de tous les pays en développement d'exécuter des recherches sur les problèmes liés à leur développement ne sont certainement pas moindres que ceux des États-Unis seuls et, par conséquent, les disparités en matière de financement sont évidentes et ce, même si le financement des organismes subventionnaires ne représente qu'entre 10 et 20 % de l'ensemble du financement de la recherche dans tous les pays en développement. (Dans certains petits pays, il est certain qu'au moins la moitié du financement de la recherche provient de sources externes, tandis que dans quelques grands pays dotés de capacités scientifiques étendues, l'aide extérieure joue un rôle beaucoup plus restreint.)

Dans un tel contexte, les organismes subventionnaires doivent prendre des mesures pour s'assurer que les fonds qu'ils octroient sont employés de la meilleure façon possible tout en veillant à ce que le programme de recherche vise le meilleur intérêt des bénéficiaires, plutôt que celui des organismes subventionnaires. La création de «consortiums de recherche» est un moyen efficace pour atteindre simultanément ces deux objectifs. Dans le cadre d'arrangements de ce genre, différents organismes subventionnaires s'entendent sur la coordination du financement de travaux de recherche portant sur des questions prioritaires. Ainsi, le Consortium pour la recherche économique en Afrique (CREA), formé d'organismes subventionnaires de toutes sortes (organismes bilatéraux et multilatéraux et fondations privées), apporte un appui essentiel aux chercheurs et décideurs des pays d'Afrique australe et orientale et ce, tout en respectant les priorités de recherche de la région et en offrant un contrôle unifié — exercé par les personnes qui travaillent dans la région — sur les sommes totales disponibles aux fins du financement. À cette fin, tous les organismes subventionnaires ont dû s'entendre sur la définition d'une approche et de règles de base communes pour l'affectation des ressources, au profit de la région.

1. *Aide extérieure à la recherche pour le développement. Étude de quelques grands organismes d'aide*, John P. Lewis, IDRC-MR160F, 1987, 81 p.

2. *Health research: essential link to equity in development* — Report of the Commission on Health Research for Development, Oxford University Press, New York, NY, 1990, 136 p.

Puisqu'il estime que sa toute première mission est de travailler à résoudre les problèmes liés à la pauvreté, le CRDI doit demeurer très conscient du fait que les résultats des travaux de recherche qu'il finance seront, dans bien des cas, employés par les groupes les plus défavorisés de la société, qui n'ont guère eu la possibilité de se familiariser avec les

De la science ultraperfectionnée à la technologie simple

L'égard de ce problème aux multiples facettes, structurer l'approche qui a finalement été adoptée à saires entre tous les participants pour définir et justifier les longues négociations qui ont été nécessaires. Ce projet donne maintenant lieu semblent à CRDI. Les résultats on ne peut plus prometteurs et il a été appuyé par cinq divisions distinctes du nementales) qui n'avaient jamais travaillé ensemble gouvernements et des organisations non gouvernementales (une université, des ministères chercheurs de quatre disciplines provenant de définitive, le projet a fait appel à la participation de dans un pays en développement. Dans sa forme saires pour mobiliser un groupe multidisciplinaire caractère complexe des mesures qui sont nécessaires. Le CRDI au Paraguay, fournit un bon exemple du par l'amélioration du logement, subventionné par Le projet *Prévention de la maladie de Chagas* disciplines et sur la manière de procéder. d'entreprendre des recherches inter- beaucoup à apprendre sur l'opportunité de la recherche. Il nous reste encore approche pluridisciplinaire et plus intégrée centres sur une seule discipline, une de développement à l'intérieur de projets décevants lorsqu'on aborde les problèmes aperçu qu'on obtient souvent des résultats le Centre préconise, depuis qu'il s'est

ceci :
Conseil des gouvernements du CRDI, on affirmait Dans un document présenté récemment au

bièmes concrets dans le domaine du développement. des travaux de recherche qui portent sur des problèmes des sciences sociales, ce qui est généralement le cas sent les frontières tant des sciences naturelles que recherche multidisciplinaire sont ceux qui dépassent les plus complexes en matière de résoudre des questions complexes. Les problèmes (économistes, sociologues et politiciens) pour physique ou des spécialistes des sciences sociales pour s'attaquer à de nombreux problèmes d'ordre naturelles (physiciens, chimistes et biologistes) en réunissant des spécialistes des sciences frontières de ces deux grands groupes, c'est-à-dire

Les sommes dont disposent tous les organismes qui subventionnent la recherche dans les pays en développement sont très peu élevées si on les compare aux besoins et à la demande qui

Collaboration entre les organismes subventionnaires

Tous les lots étant différents les uns des autres, il faut régulièrement rajuster les contrôles, mais il n'y a aucun modèle mathématique qui permette de saisir toute la subtilité des changements nécessaires. De plus, d'après ce que nous savons de la situation économique des coopératives qui assurent le séchage de la plus grande partie du thé produit à Sri Lanka, l'investissement pour un tel système de contrôle ne peut dépasser 1 000 dollars américains environ! Dans ce cas également, les premiers résultats obtenus sont très prometteurs.

Dans la même veine, des chercheurs d'Asie du Sud-Est ont eu recours à la technique évoluée des «systèmes experts» et l'ont appliquée au séchage des feuilles de thé, un domaine dans lequel les méthodes n'ont guère changé, à Sri Lanka, au cours des deux derniers siècles. Dans ce cas, il a fallu saisir toutes les connaissances du spécialiste du séchage du thé, qui «sait» à quel moment les conditions dans le séchoir conviennent à la production de feuilles de bonne qualité, et faire en sorte que ces conditions demeurent optimales pendant tout le temps nécessaire au séchage d'un lot de feuilles de thé.

Les collecteurs ressemblent à des filets de volley-ball géants et les gouttelettes d'eau sont recueillies dans des gouttières en plastique, mais cette apparence simplifiée masque une bonne compréhension technique de la formation et de la dissipation des nuages de brouillard dont l'eau est tirée.

Pacifique.

de pêcheurs du désert d'Atacama, sur la côte du qui se forment tous les jours au-dessus des villages d'extraire de l'eau potable des nuages de brouillard emplacement convenant à un dispositif qui permet trouver la conception optimale et le meilleur phénomènes physiques et météorologiques pour appel à une compréhension poussée des portant sur les *camanchacas*, au Chili. Ce projet fait Mentionnons, à titre d'exemple, le projet

appuyés par le Centre.

que doivent relever bon nombre de chercheurs pourront se payer, utiliser et entretenir, voilà le défi tout en produisant des techniques que les pauvres science contemporaine pour analyser les problèmes technologies modernes. Se servir des outils de la

aux réseaux et à y jouer un rôle bien particulier, en constituant en quelque sorte une «fenêtre» sur le milieu scientifique des pays industrialisés pour leurs collègues du Sud.

La mise en réseau est un concept maintenant tellement bien ancré qu'il a donné naissance à de nouvelles institutions internationales comme le Réseau international pour l'amélioration de la production de la banane et de la banane plantain (INIBAP) pour relier des programmes nationaux de recherche portant sur la banane et la banane plantain, et ce, au lieu de créer de nouvelles installations à partir de rien.

Recherche multidisciplinaire

On a beaucoup discuté ces dernières années, dans les milieux scientifiques tant du Nord que du

les chercheurs ont testé respectivement les effets de la fumigation et de la réfection des maisons, puis les deux méthodes conjuguées.

Le défi consistait surtout à intéresser la population locale à de telles actions, ce qui apparaît essentiel lorsqu'on veut obtenir des résultats concrets et que l'on désire étendre l'expérience à d'autres villages. Afin d'atteindre simultanément les objectifs scientifiques et sociaux, les concepteurs ont adopté une démarche résolument multidisciplinaire. Le projet a ainsi associé des professionnels de la santé et des spécialistes des sciences sociales, de la foresterie et du génie venant de deux universités du pays, du ministère de la Santé et d'autres organismes indépendants.

Au départ, les habitants du village avaient quelques notions sur les parasites, sans vraiment savoir que leurs propres habitations en abritaient les principaux vecteurs. Un sociologue et un spécialiste en santé communautaire ont rencontré les habitants pour décrire la maladie et les encourager à participer au projet. La tâche n'était pas aisée car chacune des familles devait assumer la moitié des coûts des travaux de réfection qui comportaient une dépense de 250 dollars américains (le revenu moyen par habitant ne dépassant pas 1 180 \$ par an). Les familles ont également recueilli pour les chercheurs des spécimens des insectes trouvés dans leurs habitations.

Un entomologiste et un épidémiologiste se sont attachés à comprendre le comportement de

l'insecte en cause et les effets de la maladie sur la collectivité. Les habitants ont bien voulu se soumettre à un test spécifique et, en cas d'infection, ils ont été référés au milieu hospitalier. Sur le plan technique, un architecte, un ingénieur des travaux publics et un ingénieur forestier ont entrepris d'étudier les matériaux locaux qui se prêtaient le mieux à l'expérience (bois, glaise, débris secs, paille et sable) et repensé toutes les ouvertures de la maison pour réaliser la structure la plus saine, souple et fonctionnelle, au meilleur prix.

Les premiers résultats indiquent qu'un taux inférieur d'infestation par le triatome a été constaté dans les maisons rénovées, bien que la fumigation ait, à première vue, produit les effets les plus probants. Les chercheurs estiment qu'il faudra plusieurs années avant de pouvoir apprécier l'efficacité à long terme des améliorations domiciliaires. Afin de modifier certains comportements, ils recommandent une action d'éducation pour la santé plus assidue. En effet, les villageois tolèrent dans leurs demeures la présence d'animaux porteurs de l'insecte qui cause la maladie.

Dans la perspective d'une application élargie, les chercheurs ont mis au point une stratégie qui permettra de mener de front cinq programmes d'amélioration de lots de 100 unités d'habitation. Les résultats du projet ont été présentés vers la fin de 1990 au Conseil national de l'habitation du Paraguay qui est en voie de les examiner en vue d'une éventuelle inclusion dans son plan national.

Sud, du bien-fondé et des aspects pratiques de la «recherche multidisciplinaire». Les disciplines scientifiques (biologie, chimie, mathématiques, économique, sociologie et autres) ont permis de constituer des sommes impressionnantes de connaissances et de mettre au point toute une gamme de techniques en ce qui concerne la compréhension de séries de problèmes soigneusement définis; elles ont rendu de grands services à l'humanité en créant un fonds considérable de savoir humain.

Feu de disciplines, cependant, prétendent s'attaquer aux problèmes qui relèvent des autres disciplines; ainsi, il est notoire que les sciences physiques et les sciences sociales ont toujours eu des intérêts tout à fait différents. Jusqu'à maintenant, on a toujours traité cette question de la recherche multidisciplinaire sans dépasser les

ou un problème de développement répandu comme l'approvisionnement en eau des villes — convient d'échanger de l'information de façon régulière, souvent au moyen d'un bulletin, et de se rencontrer périodiquement pour comparer leurs méthodes et leurs résultats.

À mesure que le temps passe et que ces réseaux deviennent plus vigoureux, les participants en arrivent à mettre au point un programme de recherche commun, chacun des groupes se voyant confier l'étude d'un aspect donné du sujet qui les réunit. Dans certains cas, des responsabilités particulières incombent à différents participants, par exemple en matière de formation, et, dans d'autres cas, les institutions les plus fortes s'efforceront d'aider leurs collègues moins expérimentés. Plus récemment, des groupes de recherche canadiens ont commencé à contribuer

situation est tout autre dans les pays en développement où bon nombre de scientifiques doivent se battre, isolés de leurs collègues et sans grandes possibilités de discuter avec eux de questions techniques d'intérêt commun, n'ayant qu'un accès restreint à ce qui se publie et ne sachant pas, bien souvent, quels sont leurs collègues dans les pays voisins. Face à ces conditions, des organismes subventionnaires comme le CRDI ont redoublé d'efforts pour concevoir des moyens permettant à ces chercheurs d'être en contact les uns avec les autres et de travailler de concert.

Les réseaux établis dans les pays en développement ne sont souvent, au début, que de modestes programmes dans le cadre desquels des participants qui s'intéressent à un même sujet — par exemple, une culture donnée, comme celle des graines oléagineuses, un champ de politiques comme l'éducation,



Un habitat pour prévenir la maladie de Chagas

Dans deux villages du Paraguay, 133 familles vivent aujourd'hui dans des maisons de construction solide, bien que peu coûteuse, dont la réfection a été rendue possible par un programme subventionné par le CRDI. Mis à part leur nouvelle apparence, ces habitations ont une autre qualité : elles mettent la maisonnée à l'abri des insectes qui transmettent une des affections parasitaires les plus répandues en Amérique latine, la maladie de Chagas ou trypanosomiase américaine. Les tritomes (des insectes) prolifèrent souvent dans les fissures murales et les endroits sombres des maisons mal aérées dans les zones rurales des tropiques. Lorsque, tombant du plafond, ils viennent en contact avec les occupants des lieux pendant leur sommeil, ils sucent le sang des victimes qu'ils

Pour lutter contre les tritomes, les gouvernements ont eu recours aux insecticides sans succès apparent. La vaporisation est coûteuse et n'a qu'un effet temporaire, sans compter que les insecticides les plus puissants sont souvent toxiques pour les humains et le cheptel.

Il s'agit d'une maladie à incubation longue touchant principalement des enfants en bas âge qui n'éprouveront les symptômes de la maladie que 15 ou 20 ans plus tard, au début de leur vie adulte. Les femmes enceintes peuvent également la transmettre à leurs bébés. On estime la population à risque à 90 millions de personnes, et de 16 à 18 millions, le nombre de celles qui en sont infectées. Le parasite provoque un relâchement des tissus musculaires de l'oesophage, du colon ou du cœur et les malades peuvent souffrir de troubles digestifs ou cardiaques pouvant aller jusqu'à l'infarctus. Il n'y a pas de vaccin, ni de traitement efficace connu.

Grâce au projet triennal entrepris en 1988 sous l'impulsion du CRDI, on s'est véritablement attaqué aux causes. Les chercheurs ont préconisé une manière pratique et bon marché de rénover les maisons rurales. En colmatant les fissures des murs et de la toiture et en améliorant l'éclairage et l'aération, ils ont contribué à l'éviction de l'insecte. Après avoir choisi pour terrain expérimental trois villages paraguayens,

en réseau sous-entend un système de plus en plus élaboré par le biais duquel les chercheurs unissent leurs efforts pour atteindre des buts communs. Dans le monde de la recherche au service du développement, la mise en réseau a d'abord eu pour fonction de remettre à l'isolement intellectuel de bon nombre de chercheurs des pays en développement. Il est maintenant devenu un outil puissant qui permet de réunir les talents et les ressources de personnes et de groupes dispersés oeuvrant dans plusieurs domaines différents.

Dans les pays industrialisés du Nord, les scientifiques peuvent considérer comme allant de soi la possibilité de communiquer avec leurs collègues d'institutions éloignées par le courrier électronique, le téléphone ou les rencontres personnelles lors des fréquentes réunions de leurs sociétés savantes. La science est une activité très sociale qui s'épanouit grâce à la libre circulation de l'information entre ceux qui s'y consacrent, leur créativité étant stimulée par ces échanges. La

concrets des nombreux projets que le CRDI appuie, dans ses principaux domaines d'activité (agriculture, santé, sciences sociales, information, communication, génie, et ainsi de suite) dans toutes les régions en développement. Cette année, nous entendons exposer notre programme sous des angles différents, ce qui, nous l'espérons, permettra d'illustrer les nombreux autres aspects du «renforcement de la capacité de recherche des pays en développement», qui demeure toujours l'un des principaux objectifs du CRDI.

Mise en réseau

Dans le monde d'aujourd'hui où les communications relèvent de la haute technologie, il est maintenant courant de parler de «mise en réseau», les matériels contemporains de télécommunications servant de métaphores pour toute la gamme complexe des échanges entre les individus. Dans le monde de la recherche, la mise

entre les pays. Étant donné le risque de propagation des maladies et des insectes nuisibles attaché au transfert des espèces d'un pays ou d'un continent à l'autre, les échantillons transitent d'abord par des laboratoires français et belges. Les laboratoires sélectionnent les spécimens, généralement au moyen d'un échangeonnage en éprouvette et font croître de nouvelles pousses. Lorsque leur innocuité est attestée, les plantes sont envoyées aux chercheurs du pays destinataire où elles seront cultivées et tenues sous surveillance.

Le réseau met en contact les chercheurs engagés dans les projets, ce qui rend possibles les échanges de vues, permet de tirer des enseignements des progrès réalisés et évite le double emploi. Il veille en outre à la publication des résultats de la recherche et fait circuler parmi les chercheurs tout ouvrage et document pertinent. Puisque la recherche patronnée par l'INIBAP doit servir en premier lieu au petit exploitant agricole, les nouveaux produits devront être bon marché et d'une réelle utilité. Un fongicide susceptible d'évincer la cercosporiose a déjà été mis au point, à un prix plus abordable. La recherche a également amélioré les techniques de vaporisation afin d'obtenir de meilleurs rendements avec des volumes de fongicides plus réduits.

Les chercheurs sont maintenant engagés dans l'étalonnage de nouvelles variétés résistant aux ravageurs et à la maladie, notamment la cercosporiose. À cette fin, l'INIBAP a créé un programme international destiné à la collection et aux tests de différentes variétés de fruits. On a, par exemple, découvert récemment en Amérique centrale une variété de plantain qui résiste à la cercosporiose et qui, bien que savoureux, n'est pas apprécié par les consommateurs à cause de sa forme ronde et trapue. Les chercheurs tentent maintenant de produire, par voie de croisement, une nouvelle variété qui préserve la forme traditionnelle oblongue, tout en offrant les qualités de résistance à la maladie.

L'INIBAP coordonne également la très délicate tâche des échanges de variétés végétales

Activités de programme

En octobre 1990, le CRDI a célébré le 20^e anniversaire de sa création en tant qu'organisme ayant pour objet de promouvoir la production, la mise en commun et l'utilisation des connaissances sur les problèmes des pays en développement. Au cours des mois qui ont précédé cet anniversaire, le Centre a entrepris un examen de sa stratégie, de son mode de fonctionnement et de ses principaux objectifs.

Cet examen ne sera terminé que vers la fin de 1991, mais le fait de revenir sur les efforts faits dans le passé par le CRDI pour appuyer les chercheurs des pays en développement nous a déjà permis de constater à quel point ses activités d'aujourd'hui dépassent en complexité les «projets» relativement simples qui lui ont servi de point de départ il y a 20 ans. Cette analyse a fait ressortir l'importance de notions comme la mise en réseau et

la recherche multidisciplinaire, a démontré qu'il était possible d'avoir recours à des méthodes scientifiques hautes perfectionnées pour mettre au point des technologies «simples» et nous a appris bon nombre de leçons sur les manières de favoriser la collaboration entre les organismes subventionnaires pour améliorer l'appui aux chercheurs des pays en développement. Elle a incité le CRDI à relever le défi posé par l'aide aux instituts de recherche affaiblis par une crise économique prolongée qui a eu des effets profonds dans plusieurs pays en développement, tout comme d'ailleurs cet autre défi que constitue la mise en application des résultats de la recherche à tous les niveaux, des conseils des ministres aux cliniques en milieu rural.

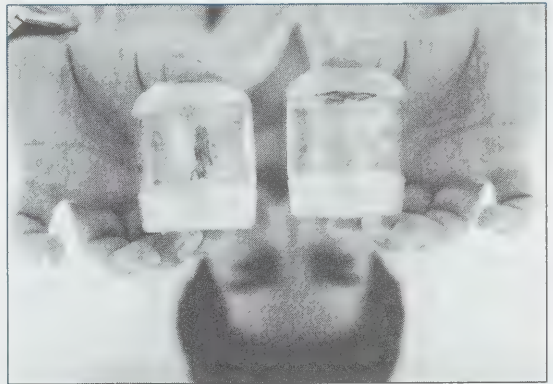
Dans les rapports annuels précédents, nous nous sommes efforcés de donner des exemples

ne surent vers qui se tourner pour obtenir conseil. Pendant quatre années consécutives, durant la dernière décennie, les exportations de plantains du Costa Rica ont chuté de 26 000 à 5 000 tonnes, ce qui représentait un désastre pour les petits exploitants agricoles et les fermes familiales. Bien que les grandes plantations commerciales soient en mesure de pulvériser des fongicides pour protéger leurs plants contre la cercosporiose, ces produits sont hors de portée financière pour la plupart des petits exploitants.

Dès 1984, le CRDI est intervenu en créant le Réseau international pour l'amélioration de la production de la banane et de la banane plantain, l'INIBAP, et en appuyant son action avec la collaboration d'un consortium formé de différents organismes d'aide. Le réseau compte un petit bureau central à Montpellier, en France, et des bureaux techniques régionaux dans quatre pays en développement. Le siège social a été installé à Montpellier pour des raisons stratégiques, car cette ville surnommée Agropolis abrite l'important Centre de coopération internationale en recherche agronomique pour le développement, le CIRAD. La bibliothèque du CIRAD comprend notamment une des collections les plus exhaustives de documents sur la banane et le plantain. Le petit bureau de l'INIBAP assure la coordination entre les équipes de chercheurs, distribue les publications les plus récentes sur le sujet, et permet d'échanger des

Sur la table des Canadiens, une banane est le dessert idéal d'un repas santé. Mais pour de nombreux Africains, ce fruit est la première source de calories et de substances nutritives et pour le fermier de ces pays, la principale récolte commerciale. Jusqu'à tout récemment, l'état de la recherche était peu avancé et reconnaissait mal l'importance de la banane et de son cousin, le plantain, pour les populations du Sud. Ainsi, lorsque dans les années 1970 et 1980, les agriculteurs d'Amérique latine et d'Afrique ont constaté un brusque effondrement de la production de bananes et de plantains provoquée par la cercosporiose ou maladie de Sigatoka, ils

Faire un réseau pour les petites exploitations agricoles



mieux-être; elles ont aussi rendu compte des injustices, réelles et perçues, attirant ainsi le ressenti et les représentations, parfois pendant des siècles.

La capacité de fabriquer des outils et de tenir des archives a élevé l'espèce humaine et l'a placée dans une position tellement supérieure aux autres qu'elle les domine toutes sans exception. Et la même chose se produit entre les sociétés et les collectivités : ce sont celles qui maîtrisent le mieux chacun de ces aspects qui ont acquis un ascendant incontestable en ce qui concerne le bien-être général. Il n'est pas surprenant, comme l'a observé Sir Arthur Lewis, qu'au cours des dernières décennies du XX^e siècle, le trait saillant qui distingue les pays riches que l'on dit « industrialisés » des pays moins riches dits « en développement » est la possession de la technologie.

La qualité de la vie, d'une manière globale, sociale, se mesure en fonction de la technologie. Cela étant dit, le pouvoir qu'a une société de choisir entre plusieurs technologies et sa capacité d'utiliser celles qu'elle choisit sont certainement indispensables à la réussite de son développement. Si on lui refuse ce pouvoir et si on limite cette capacité, aucune autre activité de développement ne pourra réussir de façon durable. Pour cette raison, une bonne partie de ce qui relève de l'APD n'a rien à voir, fondamentalement, avec le développement; l'aide alimentaire en est un excellent exemple.

Toutefois, le choix de la technologie et son utilisation ne se font pas nécessairement d'une manière judicieuse, et il revient au CRDI d'indiquer quelles sont les caractéristiques sociales qu'il considère essentielles au « développement ». Le Conseil des gouverneurs s'est penché sur cette question il y a quelques années et a dégagé les trois caractéristiques suivantes : équité, participation et durabilité.

Le Conseil s'est en outre permis de donner sa propre définition du développement, laquelle demeure pertinente et valable encore aujourd'hui :

Le développement vise le bien-être de l'être humain; il doit se réaliser dans le respect de la dignité humaine qui est le plus facilement maintenu dans des conditions de bonne nutrition, de bonne santé, de liberté de pensée, de fierté culturelle et de respect des droits de la personne.

Les décisions en matière de développement sont des décisions d'investissement; elles doivent donc être prises par les habitants mêmes des pays en développement et non par le Centre, ajoutait le Conseil. L'élément central que constitue le pouvoir de choisir, soit la capacité d'assumer le contrôle des décisions, doit être étouffé et consolidé.

Dans la réalisation de ses objectifs, le CRDI utilise les ressources de l'APD de trois manières qui se renforcent mutuellement :

- il octroie des fonds à d'autres institutions pour des activités de recherche et des activités connexes;
- il offre des conseils, de l'information et des services à d'autres institutions au sujet de telles activités; et
- il prend l'initiative d'activités de recherche au service du développement et exécuté de telles activités.

Comment le CRDI doit-il faire pour que ces fonctions soient accomplies de la meilleure manière possible et quel pourcentage de ses ressources doit être affecté à chacune d'elles ? Voilà un défi qu'il doit relever en permanence. En particulier, ses gestionnaires se doivent de veiller à ce que l'efficacité ne masque pas l'inefficacité, et à ce que les conventions ne fassent pas perdre de vue la pertinence. L'étroite convergence nécessaire à la recherche peut, et cela les pays industrialisés le comprennent depuis longtemps, entraver l'harmonisation des activités qui est essentielle pour résoudre efficacement les problèmes; elle peut aussi faire durer indéfiniment l'affectation de ressources longtemps après que les conditions propices au développement se sont substantiellement modifiées.

Si le CRDI devait cesser d'évaluer délibérément et continuellement ses programmes et sa structure, tant sa capacité de répondre avec souplesse et cohérence aux vrais besoins que son efficacité dans l'accomplissement de son mandat se détérioreraient. Le Centre doit tenir compte des différences croissantes entre les régions, de l'évolution des capacités des pays en développement en matière de recherche et des fluctuations qui touchent les ressources disponibles, et il doit s'y adapter.

(Des outils pour bâtir, 1980; Selon nos idées, 1985) et consistent en grande partie en des évaluations des réalisations du Centre préparées par des scientifiques et d'autres personnes des pays en développement. Ces documents ont donné lieu à des changements de politiques et de structure considérables visant à assurer la pertinence du travail du CRDI, à faire en sorte qu'il soit encore d'avantage à l'écoute des pays en développement et à accroître son efficacité.

Cette sensibilisation aux changements extérieurs, et la volonté de s'y adapter, ont été tout aussi cruciales que les accomplissements remarquables du personnel du Centre pour assurer l'efficacité soutenue du CRDI et son rôle de chef de file dans le monde.

Mandat du CRDI

Le mandat prévu par la Loi sur le CRDI a découlé d'observations faites par le Comité consultatif des Nations Unies sur l'application de la science et de la technologie au développement, au milieu des années 1960, selon lesquelles

Seule une petite fraction des ressources scientifiques et techniques du monde était consacrée aux problèmes des pays en développement et l'immense majorité de ses moyens intellectuels aussi bien que matériels servaient à satisfaire les besoins des pays fortement industrialisés.

Quelques années plus tard, la Commission

Pearson constata que la situation n'avait guère changé, et observa même que les activités scientifiques dans les pays en développement étaient exécutées dans une très large mesure par des expatriés et que, beaucoup trop souvent, elles profitaient surtout à des intérêts à l'extérieur de ces pays.

Le premier ministre Lester B. Pearson

déclarait, en juin 1967 :

En matière de développement international, le défi est de trouver de nouveaux moyens de concentrer plus d'attention et de ressources en vue d'appliquer les toutes dernières techniques à la solution des problèmes économiques et sociaux de l'homme à travers le monde.

En mettant ainsi l'accent sur la technologie, M. Pearson faisait écho aux points de vue d'observateurs aussi compétents que Sir Arthur Lewis, lauréat du prix Nobel, pour qui la principale distinction entre les pays industrialisés et ceux que l'on dit « en développement » réside dans

Philosophie du CRDI

Les points de vue de Pearson et de Lewis sont fondés sur une solide base anthropologique qui, elle, constitue le fondement de la philosophie du CRDI.

L'être humain se distingue de toutes les autres espèces à deux égards : contrairement aux autres créatures, il fabrique des outils et tient des archives. Les outils sont utilisés depuis des millénaires, parfois à des fins constructives, parfois à des fins de cruauté et de destruction. Quant aux archives, elles ont permis de consigner des connaissances en vue de résoudre les problèmes et de favoriser le

Le CRDI serait donc un organisme voué à la connaissance, leur production et leur diffusion. L'on admet généralement que tout le génie du Centre réside dans le dosage savant qu'il fait de ces activités, selon les circonstances et de la manière qui lui est propre. Les rapports entre les activités varient en fonction du moment, de la région, de la discipline et de l'institution; dans chaque cas, le choix dépend de l'expérience et de la sensibilité du personnel du CRDI et de son conseil de gouverneurs international. L'aptitude du Centre à faire converger aussi judicieusement toute sa panoplie de ressources lui a valu une réputation enviable, qu'il n'aurait pas acquise s'il n'avait été qu'un simple organisme subventionnaire.

Le Centre a pour objets d'entreprendre, d'encourager, de soutenir et de poursuivre des recherches sur les problèmes des régions du monde en voie de développement et sur les moyens d'application (...) des connaissances scientifiques, techniques et autres au progrès économique et social de ces régions (...)

L'incapacité de ces derniers d'acquiescer, de créer et d'utiliser la technologie. Deux éléments sont en jeu ici, car la technologie à elle seule, sans une compréhension de sa nature et de son objet, n'a guère de valeur. Il faut avoir les connaissances, des connaissances acquises en grande partie au moyen de recherches empiriques conçues et exécutées par ceux et celles qui sont le plus directement touchés par les problèmes qui entravent le développement. Une bonne part de ces travaux de recherche pourraient être effectués par des scientifiques dans les pays en développement, et une certaine partie pourrait être exécutée de la manière la plus efficace possible par d'autres, pour ces pays. Le Parlement a reconnu cette dualité et a choisi de conférer des pouvoirs au Centre dès le début sur les deux plans, comme en fait foi cet extrait de la Loi sur le CRDI :

En octobre 1990, le CRDI a célébré son 20^e anniversaire dans un contexte international très différent de celui qui existait au moment de sa création. En effet, au cours des 20 dernières années, la population mondiale a augmenté de 1,6 milliard d'habitants (soit une augmentation de 43 %); une crise de la dette, qui atteint des proportions gigantesques, a frappé les pays du Nord aussi bien que ceux du Sud; on a découvert des trous dans la couche d'ozone; les tendances mondiales en matière d'échanges commerciaux (de biens autant que de services) et de formation de capital ont évolué et changé rapidement; la guerre «Froide» a pris fin, plongeant l'Union soviétique et une bonne partie de l'Europe de l'Est dans le chaos politique et économique; la consommation de stupéfiants dans les pays du Nord a atteint des sommets inégales, et leur production et leur trafic constituent désormais une énorme industrie internationale.

Sur cet arrière-plan de changements extrêmement rapides, on n'a pas encore trouvé, et c'est troublant, de solutions aux problèmes liés au développement qui avaient retenu l'attention du Parlement du Canada en 1970. Les ressources consacrées à l'Aide publique au développement (APD) dans le monde sont passées de 26 à 48 milliards de dollars américains (pour les seuls pays de l'Organisation pour la coopération et le développement économiques), des progrès remarquables ont été accomplis en ce qui a trait à la production de céréales vivrières en Asie, il y a eu une augmentation de l'espérance de vie et une diminution de la mortalité infantile dans bon nombre de pays, la variole a été éradiquée et les infrastructures ont été grandement améliorées. Ce sont là des réalisations extraordinaires.

Il n'en demeure pas moins qu'à la fin de l'année 1990, un quart de million d'enfants des pays en développement meurent encore chaque semaine de maladies qu'il est possible de prévenir, un pourcentage substantiel de la population de ces pays vit dans une «pauvreté absolue», l'accroissement démographique ne semble pas près de ralentir, l'on assiste à des migrations massives des campagnes vers les villes et à la création de mégacités. Les perspectives d'emploi sont peu reluisantes pour les nouveaux arrivants sur le marché du travail dans presque tous les pays en développement, on constate une hausse considérable de l'incidence de plusieurs maladies infectieuses, y compris des maladies transmissibles sexuellement, des dommages considérables sont causés à l'environnement et les demandes

touchant toute la gamme des services sociaux sont telles que la plupart des gouvernements ne sont pas en mesure d'y donner suite d'une manière efficace. Il s'ensuit que les gouvernements sont de moins en moins capables de faire face à la situation, et encore moins d'avoir un fonctionnement crédible; les malaises sociaux et l'instabilité politique sont répandus en Afrique, en Amérique latine, en Asie et au Moyen-Orient. Il en résulte, notamment, une augmentation des dépenses militaires et un accroissement troublant du commerce des armes dans toutes les régions en développement.

Au cours de ces deux décennies, la subvention annuelle accordée par le Parlement du Canada au CRDI est passée de 5 à 114 millions de dollars. Un réseau comprenant six bureaux régionaux a été mis en place et l'aide que le Centre a octroyée à la recherche scientifique a bénéficié à quelque 5 000 projets exécutés dans plus de 100 pays. Le concept sur lequel se fonde le CRDI a été reproduit dans plusieurs autres pays de l'OCDE et a suscité maints hommages et distinctions, dont le prix du XXI^e siècle de la société Sigma Xi, une société de grand renom sur le plan international qui accorde des distinctions honorifiques dans le domaine scientifique. Le texte du certificat remis par la société décritait le Centre ainsi :

Le Centre aborde les problèmes de façon innovatrice, fait preuve d'une grande souplesse et tient compte des priorités des pays en développement.... Son mode de fonctionnement attentif, imaginatif et généreux a de profondes répercussions sur la stabilité et le mieux-être du monde interdépendant du XXI^e siècle.

En créant le CRDI, le Parlement avait des attentes très élevées. Il lui a donné une indépendance considérable, un mandat d'une grande souplesse et des ressources relativement importantes. À plusieurs reprises durant ces 20 années d'expérience dans un monde sans cesse en évolution, le CRDI a choisi de réexaminer sa fonction et de se demander quelle serait la meilleure manière de s'acquitter des responsabilités qui lui sont confiées de par la loi.

Le président David Hopper a présenté un important document à cet égard au Conseil des gouverneurs du CRDI une fois parvenu à la moitié de son mandat, au début des années 1970. Lors des 10^e et 15^e anniversaires du Centre (en 1980 et en 1985), le CRDI a préparé des documents d'envergure qui ont fait l'objet de publications

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Rapport annuel 1990-1991

Centre de recherches pour le développement international

Le Centre de recherches pour le développement international (CRDI) est une corporation instituée en 1970 par le Parlement du Canada pour encourager et subventionner des recherches techniques et scientifiques réalisées par les pays moins avancés, pour leur propre bénéfice.

Les domaines d'étude auxquels le CRDI prête une aide professionnelle et financière concernent : l'agriculture; l'entreposage, le traitement et la distribution des vivres; la nutrition; la foresterie; les pêches, la zootechnie; l'environnement; l'énergie; les maladies tropicales; l'approvisionnement en eau; les services de santé; l'éducation; la démographie; l'économie; les communications; les politiques urbaines; les questions liées aux femmes et le développement; les sciences de la terre et du génie et les systèmes d'information.

Bien que les fonds du CRDI proviennent totalement d'une subvention du gouvernement du Canada, le CRDI est dirigé par un Conseil des gouverneurs international, formé de 21 personnes. Aux termes de sa loi constitutive, le président, le vice-président et neuf gouverneurs doivent être de citoyenneté canadienne; parmi les dix autres gouverneurs, en fait cinq sont des ressortissants de pays en développement.

Les programmes du CRDI aident les pays en développement à se doter des capacités et des institutions scientifiques requises pour résoudre leurs propres problèmes.

Le CRDI met en évidence le rôle du scientifique dans le développement international et encourage les pays du Tiers-Monde à faire appel aux capacités de leur propre communauté scientifique. Les projets de recherche subventionnés par le CRDI sont proposés, élaborés, dirigés et administrés par les chercheurs du Tiers-Monde dans leurs propres pays, en fonction de leurs propres priorités.

Le CRDI aide à la création et au soutien de réseaux de recherche internationaux qui permettent aux pays en développement de profiter mutuellement de leurs travaux, de mettre en commun leur expérience et d'effectuer des recherches visant un même but. Il favorise également la coopération entre les chercheurs des pays en développement et leurs homologues canadiens.

Le CRDI, dont le siège est à Ottawa, a six bureaux régionaux situés dans les pays suivants : Le Caire, Égypte; New Delhi, Inde; Nairobi, Kenya; Dakar, Sénégal; Singapour, et Montevideo, Uruguay.



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Veuillez adresser vos demandes d'information au sujet du CRDI et de ses activités au bureau de votre région.

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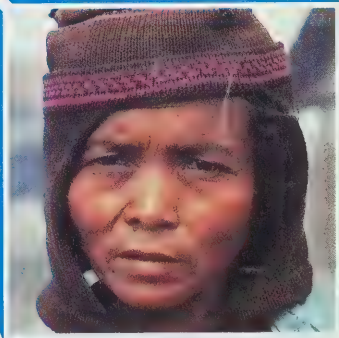
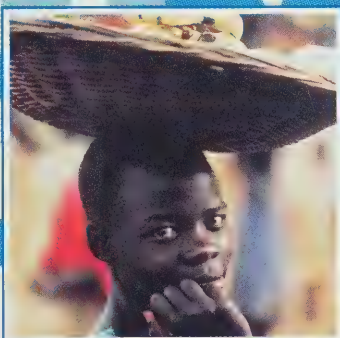
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Supplement to the Annual Report 1990–1991

International Development Research Centre

The International Development Research Centre (IDRC) is a public corporation created by the Parliament of Canada in 1970 to stimulate and support scientific and technical research by developing countries for their own benefit.

The fields of investigation to which IDRC gives its financial and professional support include: farming; food storage, processing, and distribution; nutrition; forestry; fisheries; animal sciences; environment; tropical diseases; water supplies; health services; education; population studies; economics; communications; urban policies; issues relating to women in development; earth and engineering sciences; and information sciences.

Although IDRC is funded by the Canadian Parliament, its operations are guided by an international 21-member Board of Governors. Under the IDRC Act, the chairman, vice-chairman, and 9 other governors must be Canadian citizens; currently, 5 of the remaining 10 governors are from developing countries.

The programs that the Centre supports help developing countries build the scientific competence of their institutions and researchers so that these countries can work to solve their own problems. Research projects supported by IDRC are, therefore, identified, designed, conducted, and managed by developing-country researchers in their own countries, to meet their own priorities.

IDRC helps to create and supports international networks through which developing countries can learn from each other, share common experiences, and conduct similarly designed studies in areas of mutual concern. The Centre also promotes cooperation between researchers in developing countries and their counterparts in Canada.

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Projects for which funds were approved during fiscal year 1990–1991¹

All IDRC-supported projects approved between April 1990 and March 1991 are included in the following lists.

Each project is listed by the division under which it was financed, except for those financed by several divisions in cooperation which are listed under "Multidivisional."

Each project is briefly characterized by a short text that gives the institution to which the grant was made, a short description of the research, and the monetary value of the IDRC grant. This value does not include financial support from other donor agencies nor the value of funding, salaries, or space donated by the recipient institution. The project lifetime is given in months.

At the end of this volume are indexes of the projects by country and subject. The subject index is based, in general, on the IDRC Library thesaurus, which follows standard international terminology for indexing and retrieving development information.

The IDRIS data bank, which can be accessed through a computer terminal equipped with telecommunications, can supply further information on individual projects or you can address inquiries to the Communications Division, IDRC, PO Box 8500, Ottawa, Canada K1G 3H9.

Agriculture, Food and Nutrition Sciences²

90-0002 Tree seeds (Burkina Faso) — Phase II

For the Ministère de l'environnement et du tourisme, Ouagadougou, to enable the Centre national des semences forestières to strengthen its technical capabilities and to validate its research findings while continuing

to produce quality tree seeds to meet the needs of the country and some of the needs of the subregion. \$452 900 — 60 months.

90-0007 Agroforestry (Gabon)

To enable the Institut de recherche en écologie tropicale, Libreville, to increase and diversify farmers' incomes by planting a few *Irvingia gabonensis* — an indigenous fruit tree — in association with traditional crops — maize, cassava, and yam. \$10 400 — 24 months.

90-0013 Native fruit trees (Peru) — Phase II

For the Instituto Nacional de Investigación Agraria y Agroindustrial, Lima, to promote the incorporation of selected native fruit trees into small-farm cropping systems in the Peruvian Amazon basin. \$392 850 — 36 months.

90-0033 Technology introduction (Latin America)

To enable the Corporación de Investigación Latinoamericana para el Desarrollo del Sector Rural y Costero, Colombia, to define research priorities, analytical frameworks, and methodological procedures for evaluating technology adoption in Latin America, with a view to coordinating research activities and testing technology introduction strategies through a network. \$83 300 — 12 months.

90-0035 Silviculture (Togo)

To enable the Office de développement et d'exploitation des forêts, Lomé, to use silvicultural norms for the efficient management of present and future plantations of three rapid-growth tree species. \$121 500 — 36 months.

90-0036 Bamboo germ plasm (Indonesia)

To enable the National Committee for Germplasm Conservation, Bogor, to make an intensive inventory of native bamboo species and to conserve their germ plasm in living collections. \$74 500 — 36 months.

90-0046 Postharvest economics advisor (Asia) — Phase III

To provide the Southeast Asian Ministers of Education Organization's Regional Center for Graduate Study and Research in Agriculture, the Philippines, with the services of a postharvest economics advisor to strengthen the socioeconomic research capabilities of scientists and economists in the area and the viability of their studies. \$222 940 — 24 months.

90-0049 Rice–Fish Network (Asia)

To enable the International Center for Living Aquatic Resources Management and the Freshwater Aquaculture Center, the Philippines, to maintain the momentum of the Rice–Fish Network in Asia until longer-term funding can be secured and to help find such funding. \$131 950 — 12 months.

90-0063 Root symbiosis (Morocco) — Phase II*

For the Ministère de l'agriculture et de la réforme agraire, Rabat, to enable the Division des recherches et expérimentations forestières to increase the productivity of coniferous plantations by using ectomycorrhiza in the nurseries to improve growth and resistance to drought and disease. \$144 500 — 36 months.

90-0071 Sesame (Kenya)

To enable Egerton University, Njoro, to assist sesame growers to increase their production both for home consumption and for sale, thereby improving their family nutritional status and income. \$49 280 — 24 months.

90-0072 Amazon piedmont systems (Peru) — Phase II

To enable the Instituto Nacional de Investigación Agraria y Agroindustrial, Lima, to develop sustainable and economically attractive agroforestry systems in the Peruvian Amazon piedmont and provide lumber for local fruit-packing requirements. \$51 300 — 24 months.

¹ An asterisk indicates that the contract between IDRC and the recipient may not yet have been signed.

² Projects funded jointly with another division are listed under "Multidivisional."

90-0076 Peach palm and aroids (Costa Rica) — Phase II

For the Universidad de Costa Rica, San José, to enable its Centro de Investigaciones Agronómicas to develop improved cultivars of peach palm and to consolidate a national program of certified seed of aroids (*Xanthosoma* spp, *Colocasia* spp, and *Dioscorea* spp). \$316 440 — 48 months.

90-0089 Root crops (Indonesia) — Phase II

To enable the Malang Research Institute for Food Crops, Malang, in collaboration with the University of Brawijaya, to develop and consolidate suitable technologies for sustainable root-crop production, processing, and marketing in priority growing areas of Indonesia. \$229 610 — 36 months.

90-0091 Scallops (Peru) — Phase II

For the Instituto del Mar del Perú, Callao, to improve scallop-culture systems that are suitable for adoption by low-income coastal communities. \$266 700 — 24 months.

90-0102 Oilcrop research capacity (eastern and southern Africa)*

For the Agricultural Research Foundation, Kenya, to strengthen the capability of national research systems to identify and eliminate the constraints to performance in the vegetable oil-protein sector in two countries in the region. \$424 194 — 24 months.

90-0105 Acid soils (Nigeria)*

To enable Obafemi Awolowo University, Ile-Ife, to develop environmentally sound and economically sustainable soil-management techniques for the small-scale farmer that will substitute for the present system of shifting cultivation, thereby enhancing sustainable crop production and improved soil properties. \$146 464 — 36 months.

90-0106 Root crops (Uganda) — Phase II*

For the Ministry of Agriculture and Forestry, Entebbe, to enable the Namulonge Agricultural Research Station to develop improved varieties of and husbandry practices for cassava and sweet potato that are

acceptable to both producers and consumers. \$247 760 — 36 months.

90-0107 Garlic industry (the Philippines)

To enable Mariano Marcos State University, Batac, to develop production and processing technologies and the marketing system for garlic in Ilocos Norte so as to stabilize and maximize the profitability of small-scale garlic farming. \$163 260 — 36 months.

90-0115 Root-crops pest management (eastern and southern Africa) — Phase II

For the International Institute of Biological Control, United Kingdom, to enable its Kenya Station to help countries in the region develop effective research programs on integrated pest management for root crops. \$230 746 — 24 months.

90-0117 Rural diversification (Sri Lanka)

To enable the Ministry of Agriculture, Peradeniya, to assess the relative contribution of on- and off-farm employment to income- and employment-enhancement opportunities for rural people. \$57 870 — 24 months.

90-0119 Fruit trees (Zimbabwe)

To enable the Environment and Development Activities-Zimbabwe, Harare, to determine the overall role of indigenous fruit trees in the communal lands of Zimbabwe, in terms of their socioeconomic importance, and to integrate those identified as desirable and beneficial into subsistence agropastoral farming systems. \$24 500 — 6 months.

90-0122 Forest regeneration (Chile) — Phase III

To enable the Instituto Forestal, Santiago, to develop suitable silvicultural techniques for regenerating and managing the depleted native woodlands of the semi-arid zone of central Chile, and to provide technical support to other IDRC-supported afforestation research projects in Latin America. \$244 700 — 36 months.

90-0126 Sorghum and millet subsector (Tanzania)

For Sokoine University of Agriculture, Morogoro, to enable the Department of Rural Economy to

develop a national strategy for the sorghum and millet subsector in Tanzania aiming to promote the production, efficient marketing, and use of these crops. \$197 400 — 24 months.

90-0137 Decision-making analysis (Peru)

To enable the Centro de Estudios y de Desarrollo Agrario del Perú, Lima, to understand the small-scale farmers' decision-making process and to generate and test methodological procedures that enable field researchers to consider such a process when developing and transferring technological alternatives. \$132 000 — 24 months.

90-0140 Indigenous fishery development (Lao People's Democratic Republic)

For the Ministry of Agriculture-Forestry, Vientiane, to enable the Department of Livestock-Veterinary to enhance the capacity of its Fisheries Division and associated provincial agriculture and forestry services to support the rational management of the Lao Mekong River fishery and related aquaculture. \$249 700 — 24 months.

90-0148 Agroforestry seed-clearing house (the Philippines) — Phase II

For the University of the Philippines at Los Baños, Laguna, to enable its Department of Agronomy to facilitate information exchange on seed sources and technology among organizations and individuals involved in agroforestry. \$113 570 — 36 months.

90-0159 Plantain-production improvement (Colombia) — Phase II*

To enable the Instituto Colombiano Agropecuario, Bogotá, to increase and stabilize plantain productivity in the selected areas of Colombia by transferring appropriate technology already generated in the first phase and by developing and transferring new technologies. \$224 300 — 36 months.

90-0160 Quinoa production and processing (Ecuador)*

For the Instituto Nacional de Investigación Agropecuarias (INIAP), Quito, to study the production systems, processing, and

marketing of Andean grains and to apply the technologies generated by INIAP in a pilot area of the Ecuadorian Andes. \$450 500 — 48 months.

90-0166 Fisheries review (Uruguay)

To enable the Centro Cooperativista Uruguayo, Montevideo, to conduct an analysis of the status and trends of fisheries development in Uruguay, in particular the small-scale fisheries subsector, as background for the establishment of a plan of action for the future. \$27 000 — 9 months.

90-0168 Integrated coastal development network (Latin America) — Phase II

To enable the Centro Peruano de Estudios para el Ecodesarrollo Marino, Lima, to provide regional coordination and support for artisanal fisheries research and development activities undertaken by institutions primarily in Brazil, Chile, Colombia, and Peru within the framework of the Integrated Coastal Development approach. \$240 000 — 24 months.

90-0169 Fisheries communications (Chile)

For the Consejo Nacional de Pescadores Artesanales de Chile (CONAPACH), Valparaíso, to enable the Centro de Educación, Desarrollo e Investigación de la Pesca Artesanal de Chile to contribute to the establishment of a communication policy at CONAPACH using the existing publications to provide information, training material, and advice to the associated artisanal fishing people. \$48 000 — 12 months.

90-0172 Forest tissue culture (Colombia) — Phase II

For the Pontificia Universidad Javeriana, Bogotá, to enable the Department of Biology to increase the productivity of Colombian afforestation programs through the use of tissue-culture techniques for the mass propagation of superior genotypes of selected forest species and their future genetic improvement. \$98 000 — 36 months.

90-0179 Development of the mountain zones (Algeria)*

For the Ministère de l'agriculture, Algiers, to enable the Institut national de la recherche forestière to increase agricultural production by stimulating

the economy of the mountain regions through integrated development projects focused on the river basins. \$197 600 — 36 months.

90-0180 Doctoral program in rural economics at CIRES (Côte d'Ivoire)

For the Winrock International Institute, USA, to enable the Centre ivoirien de recherche économique et social (CIRES), Abidjan, to augment its thesis supervision and research capability with a view to increasing the research capacity in agricultural economics in francophone West Africa. \$212 504 — 36 months.

90-0183 Oyster culture (Sudan) — Phase III*

For the Agriculture Research Corporation, Sudan, to establish and evaluate productive, commercial mother-of-pearl farms on the Red Sea coast and support production through governmental infrastructure and ongoing research. \$301 430 — 48 months.

90-0184 Fruit trees (India)

For the Bhagavatula Charitable Trust, Yellamanchili, to develop improved technologies for the integration of native fruit trees in upland and wasteland farming systems in India and to improve nutrition and generate alternative income and employment. \$250 000 — 48 months.

90-0185 African Feed Resources Network

For the International Livestock Centre for Africa, Ethiopia, to support the African Feed Resources Network so as to strengthen the capabilities of national agricultural research scientists and institutions in the conduct of research on forages, crop-residues, and agroindustrial by-products as the basis for developing improved, sustainable, animal-production systems. \$817 280 — 48 months.

90-0186 Oilseeds Network (Global) — Phase IV

To permit the Institute of Agricultural Research, Ethiopia, to assist national oilcrop-research programs so as to improve the nutrition, employment, and incomes of small-scale oilcrop producers in their countries. \$373 000 — 18 months.

90-0190 Eucalyptus improvement (Chile) — phase II

To enable the Instituto Forestal, Santiago, to increase the productivity of forest plantations in the semi-arid zone of central Chile by genetic improvement of eucalypt species selected on the basis of previous research. \$135 600 — 36 months.

90-0198 Bamboo (India) — Phase II

To enable the Kerala Forest Research Institute, Peechi, to evaluate bamboo stocks in southern India using modern resource-inventory methods and to develop ways of enhancing bamboo production and use. \$156 560 — 36 months.

90-0199 Rattan (India) — Phase II

To enable the Kerala Forest Research Institute, Peechi, to determine means of enhancing production and improving use of rattan resources in southern India for the generation of rural income. \$158 220 — 36 months.

90-0207 Hill crops (Nepal) — Phase II*

For the National Agricultural Research Center, Kathmandu, to allow the National Hill Crop Research Program to develop suitable technology for hill crops, with special reference to dry-land and low-cost farming systems for the mid- and high-hills, so as to increase the productivity and sustainability of hill-crops systems and help to meet the needs of the people living in the Hills regions. \$322 235 — 48 months.

90-0212 Feed resources by-products (Kenya)

For the University of Nairobi to enable the Department of Animal Production to develop alternative, locally available feed resources for pigs and poultry within small-scale production systems. \$205 900 — 36 months.

90-0224 Millet production and utilization (Kenya)

To enable the University of Nairobi to obtain a better understanding of various aspects of millet production and use so as to define a research and development agenda aimed at increasing the share of millets in the national cereals and food system. \$33 660 — 12 months.

90-0238 Goat and sheep feeding (India) — Phase II*

For Andhra Pradesh Agricultural University, Hyderabad, to enable the colleges of Veterinary Science located in Hyderabad and Tirupati to develop and disseminate intensive feeding systems for goats and sheep. \$185 070 — 36 months.

90-0245 Regional forestry coordinator (Asia)

To enable the Agriculture, Food and Nutrition Sciences Division, IDRC, to provide technical and administrative support to IDRC-supported forestry projects in South Asia by means of a regional forestry coordinator. \$30 000 — 6 months.

90-0246 Meat preservation (the Philippines)

For the University of the Philippines at Los Baños, Laguna, to enable the University's Institute of Animal Science, in collaboration with the faculties of Food Sciences and Agricultural Economics, to develop and test technologies to minimize losses of meat in transit and during display, thereby reducing the health hazard from contaminated meat in the marketing system. \$141 650 — 36 months.

90-0247 Dehuller testing (Niger) — Phase II

To enable the Institute of the Study and Application of Integrated Development, Niamey, to adapt the mini-CRS (Catholic Relief Services) dehuller for local manufacture and use and to field test and assess the impact of the modified dehuller. \$96 153 — 24 months.

90-0256 Dehuller development (Senegal) — Phase II*

For the Institut sénégalais de recherches agricoles and the Société industrielle sahélienne de mécaniques, de matériels agricoles et de représentations, Dakar, to promote the wider and sustainable use of the mini-CIS dehuller, taking into account the technical, cultural, social, and economic environment. \$286 367 — 36 months.

90-0259 Local pig husbandry (Congo)*

For the Direction générale de la recherche scientifique et technique, Brazzaville, to enable the Centre de recherches vétérinaires et

zootechniques to ensure food self-sufficiency, particularly in animal protein, and increase farmers' incomes by augmenting pig production. \$104 796 — 24 months.

90-0267 Grain dehulling (Malawi) — Phase II*

For the Ministry of Agriculture, Lilongwe, to enable the Department of Agricultural Research to examine the impact of four pilot dry-abrasive dehulling installations and extend the introduction of dehullers in the northern regions. \$159 500 — 36 months.

90-0275 Bulk storage of grain (Thailand)*

For the Department of Agriculture, Bangkok, to enable the Agricultural Engineering Division to develop technology and operational guidelines for bulk storage of paddy and maize suitable for small-farm production systems under Thailand's hot, humid, tropical conditions. \$148 620 — 36 months.

90-0285 Bamboo-rattan (southeast Asia)

To enable the PROSEA (Plant Resources of South East Asia) Foundation, Indonesia, to disseminate knowledge on bamboos and rattans among present and potential users by producing a low-cost edition of a two-volume handbook and by setting up a data base on the subject. \$40 000 — 24 months.

90-0292 Fish genetics (southeast Asia) — Phase II

To enable the Southeast Asian Fisheries Development Center, the Philippines, to develop and apply methods for the genetic improvement and performance of cultured fish in Asian artisanal aquaculture. \$102 620 — 36 months.

90-0294 NGO initiatives (Côte d'Ivoire)*

For the Centre de formation et de recherches en animation rurale, Abidjan, to obtain in-depth knowledge of nongovernmental organizations (NGOs) and local organizations working in participative development in rural and periurban zones, so as to profit from their experience, as well as to reinforce and consolidate their efforts. \$88 057 — 24 months.

90-0323 Buffalo for draft power (Thailand) — Phase II*

For Kasetsart University, Bangkok, to enable the Department of Animal Science to assess the role and importance of draft animal power on small farms and opportunities for increasing it through improved feeding and management. \$214 660 — 36 months.

90-0342 Root-crop germ-plasm collection (Viet Nam)*

For the Potato and Vegetable Research Centre, Hanoi, to enable the National Root Crop Program to collect, document, characterize, and evaluate available varieties of sweet potato, cassava, taro, and canna by establishing a national living collection and to determine breeding priorities and objectives with farmers' participation. \$203 960 — 36 months.

90-0344 Amazonian production systems (Brazil)*

To enable the Empresa Brasileira de Pesquisa Agropecuária-Núcleo de Monitoreamento Ambiental, Brasília, to improve the well-being of small-scale farmers and settlers in the Amazonian region of Machadinho, Rondonia, by identifying and promoting their most efficient and sustainable production technologies with a view to reducing the environmental impact of settlement on the low humid tropical forest. \$73 000 — 48 months.

90-0345 Adoption evaluation (Paraguay)

To enable the Centro de Estudios Rurales de Itapúa, Asunción, to determine the on- and off-farm factors that influence the use of recommended technology by small-scale producers of the northeast region of Itapúa. \$71 500 — 24 months.

90-0347 Vegetable research and development (Tanzania)*

For the Ministry of Agriculture and Livestock Development, Dar es Salaam, to enable the HORTI-Tengeru, to improve vegetable-crop production and use. \$55 668 — 24 months.

90-0348 Bamboo (Thailand) — Phase III

To enable the Royal Forest Department and Kasetsart University, Bangkok, to manage the country's

bamboo resources on a sustainable basis so as to provide increasing economic benefits to the people. \$146 310 — 24 months.

90-0353 Flora (Senegal)

For the Ministère du développement rural et de l'hydraulique, Dakar, to enable the Institut sénégalais de recherche agricole to complete the survey and prepare a catalogue of flora, and to train a Senegalese botanist to be responsible for the follow-up of the project. \$42 990 — 36 months.

90-1015 Research management and resources economics (Zimbabwe-Canada)

To enable the University of Zimbabwe, Harare, to strengthen its Department of Agricultural Economics and Extension in the area of research management and resource economics through the 1-year attachment of a professor from the University of Manitoba's Department of Agricultural Economics and Farm Management. \$30 000 — 12 months.

90-1016 *Lathyrus* improvement (Pakistan-Canada)*

For the Pakistan Agricultural Research Council, Islamabad, and Agriculture Canada, Ontario, to develop varieties of *Lathyrus sativus* that have low or zero neurotoxin content, high grain and fodder yields, effective nitrogen-fixing ability, and low-input requirements and that fit into the cropping systems and economic conditions of small farms in Pakistan. \$274 100 — 36 months.

90-1018 Phosphorus availability (Ghana-Brazil-Canada) — Phase II

For the University of Ghana, Accra; the Universidade Federal de Pernambuco, Recife; and the University of Saskatchewan, Saskatoon, to recommend crop- and fertilizer-management practices that will enhance phosphorus fertility and organic-matter conservation under sustainable, low-input agricultural production in the savanna zones of Africa and Latin America. \$280 500 — 36 months.

90-1029 Horizontal resistance in beans (Mexico-Canada)

To enable the Colegio de Postgraduados, Mexico, and the University of Guelph, Ontario, to

investigate the feasibility of developing comprehensive horizontal resistance to important bean diseases and pests in Mexico. \$185 910 — 36 months.

90-1033 Yellow dwarf virus (ICARDA-Chile-Canada) — Phase IV*

For the International Center for Agricultural Research in the Dry Areas (ICARDA), Syria; the Instituto de Investigaciones Agropecuarias, Chile; and Laval University, Quebec, to ensure that developing countries participate in, and benefit from, research to develop cereal lines that are tolerant of or resistant to barley yellow dwarf virus, drought, and disease. \$340 700 — 48 months.

90-1036 Fruit-processing industry (Caribbean-Canada)*

To enable the Caribbean Industrial Research Institute, Trinidad and Tobago, and the New Brunswick Research and Productivity Council, Fredericton, to develop and test methodologies for the establishment of new fruit-processing enterprises in poor communities in the Caribbean. \$194 600 — 36 months.

90-1040 Sustainable agroforestry (Ghana-the Philippines-Canada)*

For Brandon University, Manitoba, to enable the Ghana Rural Reconstruction Movement, Mampong-Akwapim, and the International Institute of Rural Reconstruction, Cavite, to introduce agroforestry to 150 farmers in the Mampong Valley with a view to improving their economic, social, and environmental conditions. \$245 500 — 36 months.

Communications³

90-0040 Readership survey: *Development Horizons* magazine (East Africa)

To enable Development Horizons Trust, Kenya, to plan future expansion or adaptation of the publication *Development Horizons* in the light of readers' perceptions of the magazine and its impact. \$18 840 — 12 months.

³ Projects funded jointly with another division are listed under "Multidivisional."

90-0192 Research and training on interactive communication (Nepal)*

For the Agricultural Development Bank, Kathmandu, to strengthen the communication and training activities of the bank by designing, pretesting, and implementing training strategies for on-going work that, at present, rely totally on person-to-person communication. \$51 950 — 32 months.

90-0203 Audiovisual encyclopedia (Senegal)*

For the Office de radiodiffusion et télédiffusion du Sénégal, Dakar, to permit the Institut fondamental d'Afrique Noire to disseminate in Senegal the results of research funded or not by IDRC; to start a national debate on research; and to study the impact of the research on a target public. \$128 000 — 36 months.

90-0208 Diffusion of selected innovations in Nigerian industries*

To enable the Nigerian Institute of Social and Economic Research, Ibadan, to analyze the factors influencing the successful adoption or nonadoption of industrial innovation by Nigerian firms. \$58 000 — 24 months.

90-0233 Development of national television-production capability (Uruguay)

To enable the Centro Latinoamericano de Economía Humana, Montevideo, to develop a series of policy options designed to stimulate and promote locally produced programs for Uruguayan television. \$63 418 — 18 months.

90-0241 Technology-transfer process: maize in the Southern Highlands (Tanzania)*

For Sokoine University of Agriculture, Morogoro, to enable the Department of Agricultural Education and Extension to develop a preliminary definition of the communications processes necessary to, and involved in, technology transfer based on the study of a specific agricultural innovation in maize production. \$57 545 — 24 months.

90-0250 Impact of television advertising on the values, attitudes, and aspirations of children (India)*

To enable the Institute for Scientific Research and Communication, New Delhi, to evaluate television

advertising in terms of its impact on the Indian child with a view to encouraging debate on the subject and mobilizing pressure to make advertising more socially responsible. \$22 570 — 12 months.

90-0251 Health education through *Child to Family* in rural Maharashtra (India)*
For Seth G.S. Medical College and K.E.M. Hospital, Bombay, to enable the Department of Preventive and Social Medicine to train school children in the adopted area to work as agents of change with respect to the health-related practices of their own and other families. \$7 460 — 16 months.

90-0269 Rural press (Mali)*
For the Ministère de l'information, Bamako, to enable the Agence malienne de presse et de publicité to study the impact of the rural press in Mali and to propose ways of insuring a better balance between the needs of the rural readers and the contents of the newspapers not only as a support to literacy in the national languages but also as a favoured channel to energize the structures of village cooperation. \$38 561 — 12 months.

90-0270 Rural press (Zaire)*
To enable the Centre d'études des problèmes de la communication, Kinshasa, to support the development of the rural press in Bas-Zaïre so as to contribute to the integrated rural development of that area. \$39 600 — 12 months.

90-0271 Circulation of scientific information (Bénin)*
For the Ministère de l'information et des communications, Cotonou, to enable the Office de radiodiffusion et télévision to circulate scientific and technological information (STI) among the potential users of research results, in agriculture and health particularly, as well as to measure the effect of radio and television in their attempts to disseminate STI. \$48 681 — 24 months.

90-0276 Depthnews — IDRC Features (Asia)
For the Press Foundation of Asia, the Philippines, to enable its editorial staff and freelancers to visit IDRC-funded projects and disseminate the results of IDRC-funded research

through the print and broadcast media. \$17 167 — 18 months.

90-0291 Instructional video package (Malaysia)
For the Universiti Pertanian Malaysia, Serdang, to enable the Centre for Extension and Continuing Education to strengthen agricultural-skills training in Malaysia through the introduction and use of instructional video packages. \$15 000 — 12 months.

90-0351 Communications *jatras* for women's group development (India)*
To enable the Deccan Development Society, Hyderabad, to bring women's groups together in four *jatras* or traditional village fairs organized around different development themes as a means of promoting learning and awareness. \$24 015 — 12 months.

90-1035 Communication strategies in applied scientific and technical research (Thailand–Canada) — Phase II*
To enable the Thai University Research Association, Bangkok, and McGill University, Quebec, to study communication strategies in applied scientific and technical fields focusing on two Thai bioindustries — vegetable seeds and ornamental plants — with recognized innovative potential. \$101 338 — 12 months.

90-1045 Dobby commercialization (India–Canada)
To enable the Bombay Textile Research Association and the Manitoba Research Council, Winnipeg, to commercialize the technology resulting from the project, *Dobby Mechanism (Pakistan)*, so as to provide small-scale weaving-shed owners with the opportunity to improve their products and sell them at higher prices. \$68 500 — 16 months.

Earth and Engineering Sciences⁴

90-0001 Foundry sands (Jordan)
For the Royal Scientific Society, Amman, to enable the Mechanical

Design and Technology Centre to develop sand-molding technology suited to locally available sands and binding materials and to introduce sound sand-control practices to the foundry sector. \$135 800 — 24 months.

90-0003 Grand Yaéré (Cameroon)
To enable the Ministère de l'enseignement supérieur, de l'informatique et de la recherche scientifique, Yaoundé, and the Université Cheikh Anta Diop, Senegal, to improve their knowledge of the Grand Yaéré's hydrological and hydrogeological regimes so as to increase the water supply within the region and the success rate of drilling programs. \$245 900 — 36 months.

90-0163 Leather Industry (Uruguay)*
For the Universidad de la República Oriental del Uruguay and the Laboratorio Tecnológico del Uruguay, Montevideo, to develop methods to increase the efficiency and economic sustainability of the tanning industries by reducing the amount of chemicals used per unit of leather produced and thereby minimizing or eliminating the pollution associated with the disposal of tanning wastes and improving the health of the workers and those living downstream from the tanneries. \$264 400 — 36 months.

90-0327 Foundry technology (Kenya)*
To enable the University of Nairobi and the Small and Medium Industries Development Organization, Turkey, to improve the capacity utilization of Kenyan foundries by sharing the experience gained in a similar Centre-funded project in Turkey. \$249 650 — 36 months.

90-1001 Aromatic plants (Morocco–Canada)
To enable the Institut agronomique et vétérinaire Hassan II, Rabat, and Agriculture Canada, Quebec, to optimize the development of certain aromatic plants of Morocco. \$219 600 — 24 months.

90-1002 International small-scale mining information system (India–Canada)*
For the National Institute of Small Mines, Calcutta, and Small Mining International, Quebec, to initiate the

⁴ Projects funded jointly with another division are listed under "Multidivisional."

establishment of an international small-scale mining-information system to facilitate the exchange of information and experience between countries and to include the development of a national information service in India. \$347 959 — 36 months. (Administered by IS).

90-1003 Lateritic gravel (Niger–Canada)

To enable the École des mines et de la géologie, Niamey, and the University of Moncton, New Brunswick, to determine the relationships between the physical characteristics of lateritic soils and their mechanical and hydraulic behaviour so as to define a classification system to facilitate the design and maintenance of roads in West Africa. \$246 100 — 36 months.

90-1004 Niayes water-body management (Senegal–Canada)
For Université Cheikh Anta Diop, Dakar, and Laval University, Quebec, to fine-tune the techniques for optimal exploitation of underground water in the Niayes zone on the north littoral of Senegal. \$374 596 — 36 months.

90-1005 Recycled polyethylene waste-film application (Egypt–Canada)*
For the National Research Centre, Egypt; the Royal Scientific Society, Jordan; and McGill University, Quebec, to transfer, adapt, and optimize the technology developed in Jordan to suit raw materials, weathering conditions, and plastic-film recycling processes in Egypt. \$231 700 — 36 months.

90-1008 Anthocyanic pigments (Burkina Faso–Canada) — Phase II*
To enable the Université de Ouagadougou and Simon Fraser University, British Columbia, to develop the anthocyanic pigments of *feterita* — a plant used locally as a dye source — and to commercialize the extracted product for local, regional, and international markets. \$240 000 — 24 months.

90-1009 Expansive soils (China–Canada)
For Tsinghua University, Beijing, and the University of Saskatchewan, Saskatoon, to find practical solutions to mitigate problems caused by

expansive soils — that is, soils that swell when wet and shrink when dry. \$297 765 — 36 months.

90-1014 Expansive soils (Kenya–Canada)*
For the University of Nairobi and the University of Saskatchewan, Saskatoon, to develop a methodology for designing and constructing road structures on black cotton soils, which cover significant areas of Kenya and cause extensive damage to rural access roads and pose unusual construction difficulties. \$283 028 — 36 months.

90-1019 Wood adhesives (Tanzania–Canada)
For the Tanzania Industrial Research and Development Organization, Dar es Salaam, and Forintek Canada Corporation, Ontario, to develop good quality, low-cost phenol-formaldehyde wood adhesives using cashew nut-shell liquid. \$288 200 — 36 months.

90-1020 Artificial recharge subsidence control (Thailand–Canada)*
For the Asian Institute of Technology, Bangkok, and McGill University, Quebec, to develop the appropriate technology and methodology for recharging the aquifers so as to stop land subsidence as a result of groundwater depletion in Bangkok. \$298 530 — 36 months.

90-1024 Red-algae valorization (Senegal–Canada)*
For the Université Cheikh Anta Diop and SOS-Environnement, Lycée Delafosse, Dakar; Fisheries and Oceans Canada, Ontario; and the University of New Brunswick, Saint John, to design methods to add value to the red algae of Senegal's southern coast through the local development of kappa-carrageenin. \$494 000 — 36 months.

90-1025 Tabersonine (Cameroon–Canada)*
To permit the Université de Yaoundé and the University of Alberta, Edmonton, to develop a technology for the production of tabersonine in Cameroon at the small-scale enterprise level. \$388 700 — 48 months.

90-1031 Multilayer polyethylene film (Jordan–Canada) — Phase II
For the Royal Scientific Society, Amman, and McGill University, Quebec, to produce in Jordan a new multilayer greenhouse film incorporating degraded and weathered films, with a longer service life at a lower price than the films now on the market. \$314 000 — 36 months.

Executive Office⁵

90-1007 Institutional support: International Division of the AUCC (Canada)
To enable the Association of Universities and Colleges of Canada (AUCC), Ontario, to carry on its work for the financial year 1990–1991 so as to increase the role and participation of Canadian universities in international development and cooperation. \$92 950 — 12 months. EES.

90-1047 Institutional support: International Division of the AUCC (Canada)
To enable the International Division of the Association of Universities and Colleges of Canada (AUCC), Ontario, to pursue its functions for financial year 1990–1991 with a view to enhancing the role of Canadian universities in international cooperation and development. \$117 524 — 12 months. EES.

Fellowships and Awards⁶

90-0015 The Hague Academy of International Law Scholarships (Global)
To enable the Hague Academy of International Law, the Netherlands, in 1990 to assist in training young legal scholars from developing countries in several aspects of international law. \$30 000 — 12 months.

⁵ Administering division is EES = Earth and Engineering Sciences.

⁶ Projects funded jointly with another division are listed under "Multidivisional."

90-0037 Agroforestry experimental-data handling and management: training course (East Africa) — Phase II

To enable the International Council for Research in Agroforestry, Kenya, to hold training courses to strengthen the capability and competence of field technicians involved in agroforestry experimentation. \$195 090 — 36 months.

90-0059 Regional tropical bee-keeping training course (Asia)

To enable the Universiti Pertanian Malaysia (UPM), Serdang, to disseminate, through a training course, the results of the UPM-IDRC research project on tropical bee-keeping to technicians and extension workers, selected from Asian countries. \$18 000 — 1 month.

90-0073 Oilcrops training program (Africa and Asia)

To enable the Institute of Agriculture Research, Ethiopia, and G.B. Pant University of Agriculture and Technology, India, to bring together African and Asian oilcrop researchers to exchange information and to upgrade their knowledge and skills related to the production and protection from diseases and pests of two oilseeds — *Brassica* and sesame. \$95 000 — 6 months.

90-0074 Farm-forestry training program (Asia)

To enable the Chinese Academy of Forestry, Beijing, to disseminate the experience and results of the farm-forestry research in China to scientists of other developing countries of Asia. \$168 372 — 24 months.

90-0086 Research, training, and community-health services (Latin America)

To enable the Centro Rosarino de Estudios Perinatales, Argentina, to train at least seven specialists from Argentina and other Latin American countries to develop and evaluate perinatal and obstetric community-health programs and services by conducting studies aimed at solving local problems and by participating in seminars and formal courses for 1 year. \$75 000 — 12 months.

90-0104 Building research institutions in Latin America

To enable the Instituto de Estudios

Liberales, Colombia, to set the basic agenda for research on the factors and processes most conducive to success in building and strengthening scientific research institutions in Latin America. \$74 180 — 6 months.

90-0114 Building institutional capabilities in training (sub-Saharan Africa)

To enable the Centre panafricain de prospection sociale, Bénin, to promote research on the strengthening of institutional capabilities in training and to improve human-resources development within the context of research for development in West and Central Africa. \$44 945 — 6 months.

90-0124 Internship program — Phase IV (Global)

To enable the Fellowships and Awards Division, IDRC, to continue to provide an internship program giving training opportunities to candidates from institutions or projects to which the Centre has an expressed commitment. \$150 000 — 24 months.

90-0125 Training workshop on the decision-making process of small-scale farmers (Latin America)

To enable the Grupo de Investigaciones Agrarias, Chile, to strengthen the capacity of the members of the Farm Systems Research Methodological Network to generate, validate, and transfer appropriate technology for small-scale farmers, through the improvement of their methodological abilities and expertise. \$20 780 — 6 months.

90-0151 Educational capacity in universities (Central Africa)

To enable the Bureau africain des sciences de l'éducation, Zaïre, to organize a workshop aimed at building the necessary capacity to improve teachers' skills. The workshop will be attended by 20 participants from 10 universities in Central Africa. \$21 845 — 6 months.

90-0201 Majid Rahnema — Pearson scholar

To enable the Fellowships and Awards Division, IDRC, to support Dr Majid Rahnema during 14 months at the Centre's headquarters and

several regional offices where he will conduct research on poverty and poverty alleviation. \$116 100 — 24 months.

90-0213 Pearson science management (Global)

To enable the Fellowships and Awards Division, IDRC, to provide the participants of the Pearson Fellowships Program — senior-level public servants from developing countries — with the opportunity to learn about the management of science in the public sector in Canada. \$195 000 — 18 months.

90-0309 Women, science, and development (Republic of Guinea)*

To enable the Direction nationale des recherches scientifiques et techniques, Conakry, to promote research activities on the status of Guinean women and to create better conditions for the advancement of women researchers through effective training and improved distribution of research outputs. \$32 660 — 6 months.

90-0310 Formulating and writing research proposals (Africa)

To enable the Regional Institute for Population Studies, Ghana, to train 19 researchers from 11 English-speaking countries in sub-Saharan Africa to prepare good research proposals in the various fields of social science. \$40 526 — 6 months.

90-0318 Marketing academic institutions (Cameroon)

To enable the Association of African Universities, Ghana, to initiate research into the survival techniques of African universities to encourage them to design and identify a marketing strategy consonant with their organization type. The project will focus on the Université de Yaoundé. \$32 478 — 6 months.

90-0325 Capacity building for scholarly publishing in universities (Latin America)

To enable the Centro Regional para el Fomento del Libro en América Latina y el Caribe, Colombia, to analyze the current state of university publishing in Latin America and identify its training needs; and to design and implement a training exercise for

selected authors and publishers.
\$50 350 — 12 months.

90-0326 Joint training program for the academic, public, and productive sectors (Colombia)
To enable the Pontificia Universidad Javeriana, Bogotá, to develop a program aimed at preparing a group of public managers, researchers, and industry executives to successfully face the internationalization process initiated by recent economic and social policies. \$30 000 — 6 months.

90-0346 The Hague Academy of International Law scholarships (Global)
To enable the Hague Academy of International Law, the Netherlands, to enable up to 15 law students from the developing countries to attend summer courses in 1991 or complete doctoral thesis work, or both, at the Academy and to support the Academy's training programs for legal practitioners and researchers from the Third World. \$30 000 — 12 months.

90-1010 Young Canadian Researchers Award Program (Global-Canada)
For the Fellowships and Awards Division, IDRC, to contribute to the growth of research capacity in Canada that is responsive to Third World priorities by supporting Canadians at various stages of their academic and professional careers in research or training undertaken in a Third World country. \$460 000 — 24 months.

90-1041 Research management workshop (Global-Canada) — Phase IV
To enable the University of Manitoba, Winnipeg, to provide an 18-day training course in the application of management principles to agricultural research for trainees from developing countries (principally from Africa) who are supported by the Fellowships and Awards and Agriculture, Food and Nutrition Sciences divisions of IDRC and who are completing master's and doctoral degrees in Canada. \$84 407 — 6 months.

Health Sciences⁷

90-0006 Alternative health-resources utilization in poor urban communities (the Philippines)
To enable the Asia Meridian Management Corporation, Manila, to assess the current pattern of health-care use and expenditure and evolve appropriate and relevant guidelines for using community resources to finance health services in poor urban communities in Metro Manila. \$67 616 — 12 months.

90-0026 Coliphage field kit (Malaysia) — Phase II
For the Universiti Malaya, Kuala Lumpur, to further develop and field test the "coliphage field kit" (prototype II) incorporating features for mass production. The kit is intended for use by environmental and health personnel responsible for monitoring water quality in developing countries. \$166 310 — 36 months.

90-0031 Water availability, quality, and use in rural Samana (Colombia)
For the Fundación para el Desarrollo de la Comunidad, Samana, to enable the Departamento de Caldas, Municipio de Samana, to describe the conditions of Samanas' rural water source in terms of availability, quality, and use. \$61 279 — 12 months.

90-0032 Pesticide intoxication (Egypt) — Phase II
To enable Cairo University to investigate the nature and extent of pesticide exposure in the cotton-growing industry as a basis for developing improved health-protection measures including standards, guidelines, improved procedures, and educational materials. \$197 590 — 36 months.

90-0034 Regional vaccinology centres (Latin America)
For the Pan American Health Organization, USA, to enable the Mexican Foundation for Health to do a feasibility study toward establishing a regional system for the development and production of vaccines in

Latin America. \$58 275 — 12 months.

90-0056 International ethical guidelines for epidemiological research (Global)
To enable the Council for International Organizations of Medical Sciences, Switzerland, to develop guidelines for outlining acceptable practices for epidemiological research procedures and to develop ethical review procedures. \$58 725 — 18 months.

90-0057 Effectiveness of maternal- and child-health programs (Africa)*
For the Ministry of Health, Botswana, to enable the Health Research Unit to provide information to health managers and policymakers to be used in improving the accessibility, quality, and cost-effectiveness of existing antenatal-care services and in the design of future community-based programs in Botswana and elsewhere in Africa. \$74 300 — 12 months.

90-0067 Female work profiles, survival strategies, and health of women (Ecuador)
To enable the Centro de Estudios y Asesoría en Salud, Quito, to analyze, through participative research activities, the health status of working women in several socioeconomic sectors in Ecuador, to formulate health-policy recommendations, and to offer training to women's groups that have participated in the research. \$115 869 — 24 months.

90-0078 Neurocysticercosis control (Mexico)
For the Secretaría de Salud, México DF, to enable the General Directorate of Epidemiology to evaluate health education and taeniacidal drug treatment in three rural communities to reduce the incidence of *Taenia solium* infections. The results of this study may provide the necessary tools to plan a control program. \$267 830 — 30 months.

90-0080 Workers participation (Zimbabwe)
To enable the Zimbabwe Congress of Trade Unions, Harare, to identify the extent of important occupational hazards in selected industries in Zimbabwe; to assess the role that workers can play in producing an

⁷ Projects funded jointly with another division are listed under "Multidivisional."

objective assessment of those hazards; and to determine the current nature and functioning of occupational health and safety structures at workplaces (including worker knowledge and perceptions) and the constraints to implementing control of the identified hazards. \$209 421 — 36 months.

90-0081 Andean leishmaniasis control (Peru) — Phase II

For the Universidad Peruana Cayetano Heredia, Lima, to enable the Instituto de Medicina Tropical "Alexander Von Humboldt" to develop an appropriate control strategy for Andean leishmaniasis in the Huayllacallan and Santa Eulalia valleys in Peru. \$205 160 — 36 months.

90-0082 Environment and child survival (Bangladesh)

To enable the International Centre for Diarrhoeal Disease Research—Bangladesh, Dhaka, to determine the association between existing environmental, behavioural, or sociocultural factors and mortality among children aged 1 to 59 months and to develop guidelines for interventions aimed at reducing mortality. \$191 210 — 36 months.

90-0083 Community-based mental-health research (India)

To enable the Schizophrenia Research Foundation, Madras, to develop and evaluate a model of a community-based mental-health system in a defined rural catchment area. \$78 360 — 36 months.

90-0093 Community health practitioners (Korea)

For Yonsei University, Seoul, to enable the College of Nursing to extend community involvement in primary health care. \$103 970 — 24 months.

90-0098 Essential national health research (Mexico)

For the Secretaría de Salud, México DF, to enable the Directorate of Epidemiology to develop a Mexican national plan for essential health research. \$63 765 — 18 months.

90-0099 International Commission on Health Research for Developing Countries (Global) — Phase II

For the Health Sciences Division,

IDRC, to enable IDRC and the Swedish Agency for Research Cooperation with Developing Countries to conduct a 2-year interim process to promote the concept of Essential National Health Research (ENHR). This would allow countries to plan their ENHR programs and evolve proposals for longer-term implementation of the Commission's recommendations. \$300 000 — 24 months.

90-0100 Water-quality control (Brazil and Chile) — Phase II

To enable the Universidade de São Paulo, Brazil, and the Universidad de Chile, Santiago, to further improve the coliphage and hydrogen sulfide methodologies for microbiological water-quality testing; and to assess the economic and technical feasibility of introducing the two tests into the monitoring activities of agencies operating water-quality control programs in each country. \$141 910 — 24 months.

90-0101 Occupational lung disease (Indonesia)

To enable the Regional Office of the Department of Manpower, Bandung, to disclose the prevalence of pneumoconiosis and other respiratory conditions of stone workers in relation to their exposure to dust and to prepare a practical basis for establishing environmental and medical preventive measures against these occupational conditions. \$95 580 — 12 months.

90-0113 Sexual attitudes and behaviour of adolescents (Dominican Republic)

To enable the Instituto de Sexualidad Humana, Santo Domingo, to obtain in-depth information regarding motivation and the sexual decision-making process in adolescent sexuality. \$67 597 — 18 months.

90-0131 HIV and refugees (South Africa)

To enable the Health and Refugee Trust in South Africa, United Kingdom, to develop a health-education campaign to prevent the transmission of human immunodeficiency virus (HIV) among South African refugees in Tanzania, Uganda, and Zambia and to link up with progressive organizations inside South Africa that are similarly active

in projects related to acquired immune deficiency syndrome (AIDS). \$201 450 — 24 months.

90-0132 Applied nutrition (Kenya) — Phase III

For the University of Nairobi to enable the Department of Food Technology and Nutrition to assist in the improvement of nutrition training and of nutrition policy-making of East Africa through provision and improvement of university training facilities in applied nutrition. \$420 000 — 36 months.

90-0142 Infant hepatitis-B immunization (Egypt)

For Menoufia University to enable the Liver Institute to test and compare the efficacy of neonatal immunization with vaccine for hepatitis-B virus derived from recombinant deoxyribonucleic acid in infants living in socioeconomically equivalent Egyptian communities, with and without endemic *Schistosoma mansoni* infections. \$214 752 — 36 months.

90-0149 Tuberculosis control (India)

To enable the Foundation for Research in Community Health, Bombay, to study social and operational constraints and identify interventions for strengthening tuberculosis control in rural and urban populations of Maharashtra State. \$198 040 — 36 months.

90-0153 Urban domestic-wastewater treatment (Senegal)

For the Université Cheikh Anta Diop, Dakar, to enable the Institute of Environmental Sciences to assess the feasibility of using the reconstituted hydrosere technology for treating urban domestic wastewater. \$13 703 — 8 months.

90-0161 Public-health training-needs assessment (West Indies) — Phase II

For the University of the West Indies, Jamaica, to enable the Department of Social and Preventive Medicine of the Faculty of Health Sciences to determine the public-health personnel-training needs of the region for both the public and private sectors. \$51 430 — 12 months.

90-0174 Integrated hepatitis-B diagnosis (Global)

For the PATH Foundation of Canada, Ontario, to enable the Program for Appropriate Technology in Health (PATH), USA, to develop and disseminate a rapid, simple, and affordable diagnostic tool for detecting hepatitis B in human blood, plasma, or serum. \$174 690 — 18 months.

90-0175 Design and evaluation of a management information system (Egypt) — Phase II

To enable the Palestine Red Crescent Society (PRCS), Cairo, to build a supporting management information system for research, decision-making, and planning, so as to improve the effectiveness and efficiency of the PRCS's health services. \$239 570 — 18 months.

90-0182 Rice irrigation and health (Nigeria)*

For Obafemi Awolowo University, Ile-Ife, to enable the Institute of Ecology to determine the health-related impact of the Lower Anambra Irrigation Project on the command area and the surrounding areas with a view to making appropriate recommendations on any adverse effects. \$97 860 — 36 months.

90-0188 Study of diarrhea among children aged 0 to 4 years (Bénin)*

To enable the Centre national hospitalier universitaire, Cotonou, to estimate the incidence of diarrhea among children from 0 to 4 years in the urban community of Gbégamey (District of Cotonou IV) and to identify the risk factors that can be influenced by health education, especially sociocultural beliefs, knowledge, and behaviour of parents relating to the prevention and control of diarrhea. \$16 163 — 9 months.

90-0189 Features of menopause in selected urban and rural areas of Cameroon*

For the Ministère de l'enseignement supérieur et de la recherche scientifique, Yaoundé, to enable the Medical Research Institute, in collaboration with the Centre hospitalier universitaire of the University of Yaoundé, to identify and analyze the perceptual and behavioural aspects of menopausal problems requiring nonmedical

attention with a view to helping menopausal women to effectively deal with their experience. \$52 682 — 26 months.

90-0193 Environmental research (Zambia)*

For the Ministry of Mines, Kitwe, to enable the Mines Safety Department to determine the nature of water pollution in the Kafue River system at Chingola and to use this information to strengthen the Department's ability to fulfill its regulatory and advisory functions. \$81 630 — 12 months.

90-0194 Household defluoridation (Kenya)

For the Kenya Medical Research Institute, Nairobi, to enable the Medical Research Centre to introduce laboratory-tested bone-charcoal based defluoridators at the household level in communities whose water has relatively high fluoride levels and to study their acceptability and effectiveness. \$34 271 — 18 months.

90-0196 Sexual behaviour and STDs in long-distance truck drivers (Kenya)*

For the University of Nairobi to enable the Department of Medical Microbiology to study the interaction between behaviour and biological risk factors in the incidence of sexually transmitted diseases (STDs) and human immunodeficiency virus (HIV) in a cohort of long-distance truck drivers and to test the effectiveness of an intervention program in modifying behaviour and reducing the incidence of STDs. \$146 771 — 24 months.

90-0197 Social and medical determinants of perinatal mortality (Nigeria)*

For Obafemi Awolowo University, Ile-Ife, to enable the Department of Obstetrics and Gynaecology to establish the social and biomedical factors responsible for perinatal mortality by investigating all deliveries, including those that took place at home, in the Oranmiyan Local Government Area of Oyo State. \$119 325 — 36 months.

90-0204 Understanding high-risk sexual behaviour (Uganda)*

For Makerere University, Kampala, to enable the Clinical Epidemiology Unit of Makerere Medical School to

study sexual behaviour in a sample of 60 persons recognized as being at high risk for human immunodeficiency virus (HIV) transmission in the trading centre of Lyantonde. \$83 445 — 18 months.

90-0206 Management of health technology (English-speaking Caribbean)*

To enable the Ministry of Health, Jamaica; the Ministry of Health, Saint Lucia; and National Institute of Higher Education Research Science and Technology, Trinidad and Tobago, to encourage appropriate regulation of medical devices and develop a set of interlocked information system for planning, selecting, purchasing, using, and maintaining health technologies for primary health-care services in Trinidad and Tobago. \$132 550 — 24 months.

90-0211 Health-care evaluation and management skills (Global) — Phase IV

For the University of Toronto to enable its Faculty of Medicine to support eight participants from less-developed countries in the course *Health Care Evaluation and Management Skills* and to study the feasibility of replicating the course in a less-developed country and to select a suitable site. \$173 568 — 12 months.

90-0217 CIMDER (Colombia) — Phase III*

For the Centro de Investigaciones Multidisciplinarias en Desarrollo Rural (CIMDER), Cali, to strengthen its institutional capacity to carry out community-based research in partnership with communities, academic institutions, and government. \$360 000 — 48 months.

90-0219 Iodine-deficiency disorders (Ghana)

To allow the University of Ghana, Accra, to determine the prevalence and etiology of iodine-deficiency disorders in selected communities of Ghana so as to formulate prevention and control measures to be applied nationwide. \$324 557 — 36 months.

90-0225 Mental health (Peru)

To enable the Universidad Peruana Cayetano Heredia, Lima, to collect information on the way in which communities identify and manage

mental-health problems with a view to developing socially and culturally sensitive mental-health services and enhancing community participation in the care of the mentally ill. \$99 260 — 24 months.

90-0226 Mental health (Brazil)

For the Universidade Federal da Bahia, Canela, to enable its Department of Preventive and Social Medicine to collect information on the way in which communities identify and manage mental-health problems with a view to developing socially and culturally sensitive mental-health services and enhancing community participation in the care of the mentally ill. \$194 550 — 24 months.

90-0229 Hepatitis-C epidemiology (China)*

To enable the Shanghai Medical University to determine the epidemiologic importance of the recently identified hepatitis-C viral infection in the general population of Shanghai and in acute viral-hepatitis patients. \$61 900 — 36 months.

90-0231 Hospital management information system (Colombia) — Phase III

To enable the Fundación la Previsora para la Seguridad Social, Bogotá, to contribute to modern hospital management by providing a workable tool that permits management by objectives in a participatory way, while developing within the hospital a corporate culture of efficient, efficacious, and humane services. \$159 670 — 18 months.

90-0235 Infant mortality in South Kanara (India)*

For Kasturba Medical College, Manipal, to enable its Department of Community Medicine to study the factors influencing the infant-mortality rate in Dakshina Kannada and Dharwad districts. \$64 580 — 30 months.

90-0243 International forum for AIDS research (Global)

For the Institute of Medicine, USA, to enable the National Academy of Sciences to improve coordination and communication among institutions that fund research on the acquired immune deficiency syndrome (AIDS) by establishing a forum to identify research needs, optimize available

funds, and prepare for expected clinical trials of vaccines and therapies. \$50 000 — 36 months.

90-0261 AIDS counseling and education (Senegal)*

For the Association nationale des assistants sociaux et aides spécialisés, Dakar, to enable the École nationale des assistants sociaux et éducateurs spécialisés to promote research and training in health education and acquired immune deficiency syndrome (AIDS) counseling among social workers. \$50 184 — 12 months.

90-0274 Ecology and prevention of yellow fever (Nigeria)*

For the University of Ibadan to enable the Department of Virology to assess community and environmental factors that influence the occurrence of yellow fever so as to formulate a feasible strategy for its prevention and control. \$222 090 — 36 months.

90-0278 Schistosomiasis intervention trial with the botanical molluscicide *endod* (Zimbabwe)*

For the Ministry of Health, Causeway, to enable the Blair Research Laboratory to determine the efficacy, acceptability, and cost-effectiveness of applying a plant molluscicide, *Phytolacca dodecandra*, through the efforts of the community and the health authorities, in maintaining low morbidity and transmission levels of schistosomiasis after chemotherapy. \$242 290 — 48 months.

90-0288 International health communications in Canada — Phase III

To enable the Association of Universities and Colleges of Canada, Ontario, to continue and improve *Synergy*, its bilingual quarterly newsletter, to produce an electronic news bulletin, and to collaborate with other international health groups to develop a data base of Canadian projects, expertise, and opportunities in international health. \$162 845 — 24 months.

90-0295 Safe use of pesticides (Thailand)*

For Chulalongkorn University, Bangkok, to enable the Department of Pharmacology in the Faculty of Pharmaceutical Sciences to improve on a strategy to encourage and educate farmers in the safe handling

and use of pesticides. \$69 730 — 24 months.

90-0297 Health system in Uruguay

To enable the Centro de Estudios de la Realidad Económica y Social, Montevideo, to gain an appreciation of the evolution and performance of institutions of collective medical assistance, with emphasis on their relationship with the public sector, so that appropriate policies can be developed and implemented by the Ministry of Health. \$203 580 — 18 months.

90-0303 Female circumcision (Kenya)

For Moi University, Eldoret, to enable the Department of Anthropology to better understand the social and cultural determinants of female circumcision in a number of communities and to inform the people concerned of its effects on the health of women and children. \$14 287 — 12 months.

90-0322 Amazonian leishmaniasis in the Peruvian Andes (Peru)

To enable the Centro de Investigación y Promoción Amazonica, Lima, to study the social dimensions of the epidemiology of mucocutaneous leishmaniasis, in particular the phenomenon of seasonal migration in southeastern Peru. The project will analyze the local response to the disease and investigate possible alternatives to the current health system based on community self-help groups. \$246 851 — 36 months.

90-0330 Health-services utilization (Haiti)*

To enable the Association de santé publique, Port-au-Prince, to study the factors that determine the underuse of health services in the municipality of Miraogane. \$72 500 — 6 months.

90-0331 West and Central Africa AIDS Research Network*

To enable the Africa AIDS Research Network Secretariat, Senegal, to strengthen multidisciplinary research on acquired immune deficiency syndrome (AIDS) for the promotion of AIDS prevention in the region through the organization of a small-grants program and a number of research-related workshops. \$160 800 — 24 months.

90-0336 Development of a model for evaluating local health systems (Argentina)*

To enable the Centro de Apoyo al Desarrollo Local, Buenos Aires, to develop, evaluate, and disseminate a comprehensive evaluation model for local health systems. \$152 040 — 12 months.

90-0340 Water and sanitation (Zimbabwe)*

For the University of Zimbabwe, Harare, to enable the Training Centre for Water and Sanitation to improve the capacity of postgraduate students to undertake applied research projects in water and sanitation. \$50 000 — 12 months.

90-0349 Understanding high-risk sexual behaviour (Kenya)*

For the University of Nairobi to enable the Departments of Psychology and Medical Microbiology to better understand the sexual behaviour that results in the acquisition and transmission of sexually transmitted disease (STD) and human immunodeficiency virus (HIV) and to evaluate the effectiveness of group counseling in preventing STD–HIV acquisition in a high-risk group of individuals. \$50 546 — 18 months.

90-0355 Human immunodeficiency virus (HIV) and the labour movement (South Africa)*

For the Workplace Information Group, Johannesburg, to enable the Transport and General Workers Union, South Africa, to gather information that will identify needs within the union related to acquired immune deficiency syndrome (AIDS) and to use this information to develop a comprehensive education program and AIDS policy. \$74 759 — 24 months.

Information Sciences⁸

90-0008 Patent technological information (Africa)

To enable the African Regional Industrial Property Organization, Zimbabwe, to assist the industrial and economic development of its member

states by improving and strengthening its industrial-property activities through the addition of patent information. \$225 740 — 24 months.

90-0009 MINISIS Resource Centre (Latin America)

For the Universidad Nacional Autónoma de México, Mexico, to enable the Centro de Información Científica y Humanística to establish a MINISIS Resource Centre to provide service in Spanish within the region to new and established users of MINISIS so as to enable them to make effective use of the software system in automating their information management and delivery requirements. \$180 070 — 36 months.

90-0010 Integrated coconut information program (Asia and the Pacific)

For the Asian and Pacific Coconut Community, Indonesia, to further strengthen its information activities by establishing a coherent sustainable information system to assist its member countries in improving the production, processing, and marketing of coconuts. \$361 725 — 36 months.

90-0011 Community bookstores (Ecuador)

To enable the Centro para el Desarrollo Social, Quito, to support, at the root-organization level, a permanent campaign to promote educational material, literary works, periodicals, and brochures produced by Ecuadorian research and social-advocacy organizations. \$40 000 — 24 months.

90-0014 West Africa Rice Information System: WARIS

For the West Africa Rice Development Association, Côte d'Ivoire, to strengthen and upgrade its existing library services and establish the necessary infrastructure for developing effective information services in rice research and production in the region. \$293 415 — 36 months.

90-0016 Irrigation management information-needs assessment (Global)

To enable the International Irrigation Management Institute, Sri Lanka, to assist irrigation managers in developing countries to identify their

internal and external information needs and to put into place a system for satisfying those needs. \$196 370 — 15 months.

90-0017 Debt recording and management outreach (Global)

To permit the Information Sciences Division, IDRC, to assist debt offices in ministries of finance or central banks in developing countries by making the Commonwealth Secretariat's Debt Recording and Management System (CS/DRM) available to non-Commonwealth countries for recording, monitoring, and analyzing external debt and grants and other financial flows, thereby improving the quality of information ingredients of debt-management functions. \$528 750 — 36 months.

90-0019 Decentralization of industrial information services (Peru)

To enable the Instituto de Investigación Tecnológica Industrial y de Normas Técnicas (ITINTEC), Lima, and the Programa de Fomento de la Pequeña Empresa Industrial, Trujillo, to decentralize ITINTEC's technological information services so as to adequately meet the demand for industrial information from Peruvian cities distant from the capital. \$271 075 — 24 months.

90-0022 National genetic resources documentation (Global)

For the International Board for Plant Genetic Resources, Italy, to provide expertise, advice, and a tangible method to initiate, develop, and sustain genetic-resources documentation in national and local programs. \$271 705 — 19 months.

90-0027 African water and sanitation information system (West and Central Africa) — Phase II

To enable the Comité interafricain d'études hydrauliques, Burkina Faso, to set up a demonstration information network on water and sanitation among its member states. \$150 680 — 24 months.

90-0028 ODD experimentation: registry office (Senegal)

To enable the Délégation à l'informatique, Dakar, to experiment with the optical digital disk (ODD) technology for the archival storage of

⁸ Projects funded jointly with another division are listed under "Multidivisional."

data, which would be an appropriate means of improving the processing of vital statistics. \$165 680 — 18 months.

90-0029 Creole information network: marketing (Haiti)

To enable the Institut haïtien de coopération et d'études latino-américaines et caraïbéennes, Port-au-Prince, to set up an information network to facilitate the production, in the medium term, of the most realistic inventory of basic agricultural commodities possible. \$100 000 — 18 months.

90-0039 Information for rural and urban development (Chile) — Phase II

To enable the Centro de Estudios en Tecnologías Apropriadas para América Latina, Valparaíso, to reinforce its information capacity in the field of appropriate technology while decentralizing the service and initiating gradual income generation. \$122 010 — 36 months.

90-0045 Juveniles documentation network (Latin America and the Caribbean)

To enable the Banco del Libro, Venezuela, a nongovernmental organization dedicated to making good quality books available to children and youths in the marginalized sectors of society, to allow its Documentation Centre to extend the services it offers to educators and librarians. \$84 500 — 24 months.

90-0047 Information network on public enterprises in developing countries: a pilot project (Global)

To enable the International Centre for Public Enterprises in Developing Countries, Yugoslavia, to increase the efficiency and productivity of public enterprises by improved management information systems to ensure that they act as instruments of industrial and economic development and do not become economic liabilities. \$77 290 — 18 months.

90-0051 Debt recording and management system — Phase II (Caribbean)

To enable the Eastern Caribbean Central Bank, Saint Kitts and Nevis, to assist the ministries of finance of its member states in recording, monitoring, and analyzing external

and domestic debt, external grants, and other financial flows. \$200 000 — 24 months.

90-0064 Information system for animal production in Latin America and the Caribbean

To enable the Instituto Interamericano de Cooperación para la Agricultura, Costa Rica, to develop an information system for the projects of the Red de Investigación en Sistemas de Producción Animal en Latinoamérica (Latin American Research Network for Animal Production System, RISPAL) with a view to promoting an on-going flow of information among network members and facilitating the transfer of technologies to small-scale farmers. \$197 065 — 24 months.

90-0068 Eastern and southern African communications network

To enable the University of Nairobi, Kenya, to experiment with computer-based networking to acquire the necessary expertise and technological capacity and to promote more efficient and effective communication within the research community in the region. \$148 070 — 24 months.

90-0090 Caribbean computer-based communication development

For the Economic Commission for Latin America and the Caribbean, Trinidad and Tobago, to facilitate and expand the use of computer-based telematic techniques for various aspects of developmental services; to promote greater use of data bases and information systems and increased and more timely information exchange within the user community; and to improve the flow of information for social and economic development in the Caribbean. \$284 220 — 30 months.

90-0139 Debt recording and management systems (British Virgin Islands)

For the Ministry of Finance, Road Town, to assist the Ministry and the Treasury in recording, monitoring, and analyzing external debt and domestic and other financial flows through the use of the Commonwealth Secretariat's Debt Recording and Management System (CS/DRM), thereby improving the quality of information items for

debt-management functions. \$18 000 — 12 months.

90-0141 Development of an electronic network for African NGOs

To enable the Environment Liaison Centre International, Kenya, to consolidate and build on initiatives taken by the community of nongovernmental organizations (NGOs) to develop a resilient, expandable, directly interconnected electronic NGO network in Africa. \$150 240 — 24 months.

90-0144 Information services on communication (Peru)

To enable the Instituto para América Latina, Lima, to assist in defining an appropriate structure for a national network on information about communications in Peru. \$37 020 — 12 months.

90-0146 Africa Regional Center for Information Science: ARCIS

To enable the University of Ibadan, Nigeria, to provide initial support for the creation of ARCIS as an autonomous institute in the Faculty of Education of the University. \$125 000 — 12 months.

90-0155 Market research on the use of management information in India

To enable the Indian Institute of Management, Ahmedabad, to conduct market research in India to assess the requirements of those working in business, industry, and the government sectors in health, energy, agriculture, education, and transport and teaching and research for management information. \$57 000 — 16 months.

90-0157 Grant and debt recording and management system (Lao People's Democratic Republic)*

To enable the Ministry of Economy, Planning and Finance, Vientiane, to assist the government in attaining its economic and social development goals by improving the management of external loans, grants, and other financial flows and ensuring that debt-service payments are maintained at sustainable levels. \$68 520 — 36 months.

90-0254 Poison control and information service network (the Philippines)

For the University of the Philippines, Quezon City, to enable the Philippine General Hospital of the University's College of Medicine to determine the prevalence of acute poisoning in two selected regions of the country and to pilot test a poison control and information network to provide doctors and health workers with accurate and timely information on poisons and poisoning. \$90 000 — 24 months.

90-0258 Semi-Arid Tropical Crops Information Service: SATCRIS (South Asia and Africa) — Phase II

To enable the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), India, to strengthen the ability of the ICRISAT subcentre in Niamey to provide users with the information they require and to support the national agricultural research services with new products and services. \$122 505 — 36 months.

90-0268 Smallholder information and resources needs for maize production (Nigeria)*

For the University of Benin, Benin City, to enable the Department of Geography and Regional Planning of the Faculty of Social Sciences to investigate dissemination and use patterns of agricultural technology information to maize farmers in three states in Nigeria. \$22 665 — 18 months.

90-0282 CEHANET — Phase II (Middle East)

To enable the World Health Organization's Regional Office for the Eastern Mediterranean, Egypt, to strengthen the national centres of the Environmental Health Regional Information Network (CEHANET) and expand the network's coverage and services to include more countries in the region. \$100 000 — 24 months.

90-0284 Research information system (Burkina Faso)

For the Ministère des enseignements secondaire, supérieur et de la recherche scientifique, Ouagadougou, to enable the General Secretary of Banwti, a coordinating organization within the ministry of research, to

develop a permanent information system for use in the planning, coordination, and follow-up of research and as a reference tool for researchers, research institutions, and donors. \$81 056 — 24 months.

90-0305 Pilot cooperatives information system (Tanzania) — Phase II*

To enable the Co-operative College, Moshi, to establish a pilot agricultural cooperatives information system, based on the data-base approach developed in Phase I, to facilitate effective control and use of cooperative data resources. \$133 395 — 24 months.

90-0306 Debt recording and management system (Guyana)

To enable the Ministry of Finance, Georgetown, to record, monitor, and analyze external debt and domestic and other financial flows, thereby improving the quality of the information component in debt-management functions. \$38 670 — 12 months.

90-0314 Access to information (India)

To enable the Consumer Education and Research Centre, Ahmedabad, to study issues relating to access to information and to contribute to the public debate and participation in the preparation of the government's proposed amendment to the Official Secrets Act. \$51 170 — 12 months.

90-0316 SACCAR data base for agricultural research resources assessment (southern Africa) — Preliminary Phase

To enable the Southern Africa Centre for Cooperation in Agricultural Research (SACCAR), Botswana, to develop a computerized management-information system to support effective agricultural research planning and resource allocation and to promote regional cooperation in agricultural research and training in the Southern Africa Development Coordination Committee. The preliminary phase will be devoted to assessing needs and identifying the best alternative for a microcomputer-based research-management information system. \$69 125 — 12 months.

90-0329 Women and development information network (Costa Rica) — Phase II*

For the Asociación Femenina, Programa Nacional de Asesoría y Capacitación para la Mujer Cooperativista, San José, to enable the Programa de Información para la Mujer to consolidate the network, its products, and services, and to expand its scope to include women and health. \$110 000 — 24 months.

90-0334 Women's Information Network (Peru)*

For Centro de Documentación e Comunicación Educativa-Mujer, Lima, to enable EPRAM, a small nongovernmental organization, to develop an information network, linking women's organizations with the policymakers on women's affairs, and with the mass media at the national and regional levels. \$49 500 — 18 months.

90-1011 Geographic information system for water-resource management (Egypt-Canada)

To enable Canada Energy, Mines and Resources, Ontario, in collaboration with the Water Research Center, Cairo, to develop a prototype geographic information system for storage, manipulation, and analysis of data that will be applied for short- and long-term management of the water resource in Egypt and will be used in conjunction with the exploitation of spatial hydrological models. \$206 650 — 30 months.

90-1026 Written languages of China (China-Canada) — Phase II

To enable the Institute of Nationality Studies, China, and Laval University, Quebec, to provide the Chinese government with the necessary scientific information to guide it in formulating and implementing its language-planning policy and to disseminate this information to the minority communities and to the research community both in China and in other multiethnic countries and to strengthen its research capacity. \$200 500 — 24 months.

90-1028 Industrial information and documentation (Mauritania-Canada)

To enable the Ministère des mines et de l'industrie, Mauritania, and the Centre de recherche industrielle du

Québec to help the Direction de l'industrie to reorganize its information service to strengthen the existing mechanism for industrial and technological patent information. \$113 320 — 24 months.

90-1038 Geographic information system for agricultural development (Morocco–Canada) — Phase II

To enable the Institut agronomique et vétérinaire Hassan II, Rabat, and the University of Sherbrooke, Quebec, to create a geographically referenced agricultural information system so as to classify, collect, and evaluate resources in a rain-fed farming region within the context of agricultural planning and development. \$210 335 — 36 months.

90-1044 Revenue generation and the disabled in economically disadvantaged countries (Global–Canada)

To enable the Disabled Peoples' International, Manitoba, to undertake a broad study of income-generating strategies that have worked for and with disabled persons in various regions of the world, and to disseminate the findings through an international conference and various media. \$148 500 — 15 months.

Multidivisional⁹

90-0004 Nutrition in urban slums (India)

For Shreemati Nathibai Damodar Thackersey Women's University, Bombay, to enable the Department of Postgraduate Studies and Research in Home Science to study the nutrition and health behaviour of slum families and to develop programs to improve their access to food, income, and health services provided by government and nongovernmental agencies. \$317 550 — 36 months. AFNS–FAD–HS–SS–SPA.

⁹ Projects listed in this section are jointly funded by several divisions: AFNS = Agriculture, Food and Nutrition Sciences; COMM = Communications; EES = Earth and Engineering Sciences; FAD = Fellowships and Awards; HS = Health Sciences; IS = Information Sciences; OPE = Office of Planning and Evaluation; SS = Social Sciences; and SPA = Special program activities.

90-0018 Integrated pest management, extension, and women (the Philippines) — Phase II

To enable the University of the Philippines at Los Baños to improve the health, productivity, and income of rural households in rice-growing regions of the Philippines with a special focus on women, youth, and landless labourers. \$247 110 — 36 months. AFNS–COMM–SS–SPA.

90-0024 Agricultural pilot survey for Vientiane Province (Lao People's Democratic Republic)

For the Ministry of Economy, Planning and Finance, Vientiane, to enable the State Statistical Centre to generate the information needed for the development of the agricultural sector and to build the Centre's ability to organize, implement, and disseminate the results of surveys. \$36 585 — 15 months. AFNS–SS.

90-0041 Institutional support: CEDRES*

For the Université de Ouagadougou, Burkina Faso, to enable the Centre d'études, de documentation, de recherches économiques et sociales (CEDRES) to increase its productivity, to enhance the diffusion of its research results, and to strengthen its human resources. \$470 240 — 36 months. COMM–FAD–IS–SS.

90-0042 Forestry and timber sector (Ghana)

For the University of Cape Coast to enable the Centre for Development Studies to analyze the potential role of the forestry and timber sector in the country's development, with due regard to resource conservation, maximization of value added, and the distribution of benefits. \$56 728 — 24 months. AFNS–SS.

90-0054 Development market research network (Global)

To enable the Agriculture, Food and Nutrition Sciences Division, IDRC, to define a conceptual framework for integrating development market research into the developmental process; to elaborate guidelines for applying market research to development in different cultural environments; to identify a research agenda and training needs for future support; to develop a data bank; and to market the conclusions to various

types of development agencies. \$70 000 — 12 months. AFNS–SPA.

90-0060 Training course in milkfish hatchery (the Philippines)

To enable the Southeast Asian Fisheries Development Center, Manila, to disseminate, through training, the milkfish-breeding technology developed by its Aquaculture Department with IDRC's support. \$12 000 — 1 month. AFNS–FAD.

90-0061 Rapid rural appraisal training program (West and Central Africa)

To enable the Catholic Relief Services, Senegal, to train a group of West African researchers and staff of nongovernmental organizations in the use of the "Rapid Rural Appraisal" technique. \$115 000 — 24 months. AFNS–FAD–HS–SS.

90-0069 Training in management and marketing of information and information services (eastern and southern Africa)

To enable the Eastern and Southern African Management Institute (ESAMI), Tanzania, to promote the use of information through active marketing programs; to improve the sustainability of information services through more efficient and effective management; to strengthen the information and documentation skills of regional staff; and to enhance ESAMI's ability to provide complete programs on management development. \$425 710 — 36 months. FAD–IS.

90-0077 Amazonian network: RINAP (Latin America)

For the Centro de Estudios y de Desarrollo Agrario del Perú, Lima, to support the Peruvian Amazon Researchers' Network (RINAP) as a mechanism to integrate and strengthen applied research efforts for the sustainable development of the Peruvian Amazon. \$430 260 — 36 months. AFNS–IS–SS–Regional Office Funds.

90-0079 Plantain (Ghana)

For the Council for Scientific and Industrial Research, Kumasi, in collaboration with the University of Ghana, to improve the productivity of plantain and increase the per-capita income of small-scale farmers. \$232 900 — 36 months. AFNS–COMM.

90-0095 Strengthening capability for essential health research (Mozambique)

Ministério de Saúde, Maputo, to enable the Instituto Nacional de Saúde to begin a process of strengthening Mozambique's essential national research capabilities in primary health care. \$875 000 — 36 months. FAD-HS-IS-SS.

90-0097 Drepanocytic anemia and traditional medicine: ASAFED publications (Africa)

To enable the Association africaine d'éducation pour le développement (ASAFED), Togo, to disseminate the scientific information (health and cultural) developed and prepared by African researchers, thus making African populations more aware of the medical problems existing in Africa and of effective means of solving them. \$80 000 — 6 months. COMM-IS.

90-0103 Socioeconomics in agroforestry (Africa)

For the International Council for Research in Agroforestry, Kenya, to enhance the relevance of agroforestry research and technology development to small-scale African farmers by incorporating socioeconomic values into the research process. \$457 580 — 36 months. AFNS-SS.

90-0108 IRD evaluation (Central America)

To enable the Inter-American Institute for Cooperation on Agriculture, Costa Rica, to develop a conceptual, methodological, and operational framework to effectively implement the technological and credit components within the context of integrated rural-development (IRD) projects, in such a way that the well-being of the target population can be significantly increased while the environment is protected through sustainable agricultural-production alternatives. \$156 700 — 24 months. AFNS-SS.

90-0110 Women's participation in communication for development (Tanzania)

For the University of Dar es Salaam to enable the Faculty of Arts and Social Sciences to explore the potential of two different communications media — popular theatre and

small-format video — to improve participation by rural Tanzanian women in planning, implementing, and evaluating development projects intended to improve their quality of life. \$49 142 — 12 months. COMM-SS.

90-0111 Women and access to land in rural areas (Côte d'Ivoire)*

To enable the Ministère de la promotion de la femme, Abidjan, to improve the sociolegal status of women in terms of their access to land in Côte d'Ivoire. \$76 150 — 18 months. SS-SPA.

90-0112 Agroindustry networks (Latin America)

To enable the Inter-American Institute for Cooperation on Agriculture, Costa Rica, to contribute to the establishment of the Program for the Development of Rural Agroindustry in Latin America and the Caribbean through support to three national rural agroindustry networks in Chile, the Dominican Republic, and Ecuador. \$238 563 — 24 months. AFNS-IS.

90-0118 Legumes and nutrition (the Philippines)

To enable the Philippine Council for Agriculture and Resources Research and Development, Los Baños, to develop a community-based program to combat protein malnutrition that integrates crop production, crop- and food-product processing, marketing of production surpluses, extension education, and community development. \$111 100 — 18 months. AFNS-SPA.

90-0123 Urban agriculture (Tanzania)

To enable the University of Dar es Salaam to understand in greater detail current trends of urban agriculture in Dar es Salaam with special reference to land-use change in open spaces within the built-up areas, tenure problems, and possible future policy interventions to enhance urban agriculture. \$18 344 — 12 months. AFNS-SS.

90-0129 Privatization of the sea and artisanal fishing (Chile and Peru)

For the Universidad Católica de Chile, Santiago, to enable the Institute of Sociology to obtain an understanding of the importance that

the privatization of the sea has taken in recent years in Chile and neighbouring Latin American countries, especially Peru, and of its effects on artisanal fishing. \$88 590 — 18 months. SPA-SS.

90-0130 Data base on the Ecuadorian agricultural sector

To enable the Centro de Planificación y Estudios Sociales, Quito, to build a comprehensive statistical data base covering all aspects of the Ecuadorian farming sector for 1950–1990 that will serve to generate indicators useful for studying and designing agricultural policies at the national level. \$152 120 — 18 months. IS-SS.

90-0133 Economic policy, equity, and health network (Africa)

To enable the Zimbabwe Congress of Trade Unions, Harare, in collaboration with the Department of Economics of the University of Zimbabwe, to bring researchers in economics and health together with activists in community-based organizations to address issues related to economic policy, equity, and health. \$229 425 — 30 months. HS-SS.

90-0136 Training on fish nutrition and culture (Latin America)

For the Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis, Brazil, to enable the Centro de Pesquisa e Treinamento em Aquicultura to hold training courses that will provide theoretical and practical training in the subject of fish nutrition and culture systems; support ongoing aquaculture-research activities and extension programs; upgrade local research capability in freshwater-fish culture; and contribute to an increase in aquaculture production, through skills upgrading in culture methodology. \$95 000 — 12 months. AFNS-FAD.

90-0143 Research methodology in social sciences (West and Central Africa)*

For the Université Marien Ngouabi, Congo, to enable the Faculty of Sciences to add to the course program of some universities a module on social-sciences research methodology set up and given by specialists in the field. \$95 125 — 6 months. FAD-SS.

90-0147 Asian Small Ruminants Information Centre*

To enable the Central Sheep and Wool Research Institute, India, to establish the Asian Small Ruminant Information Centre (ASRIC) as the information component and support arm of research scientists and national programs cooperating in the Small Ruminant Production Systems Network for Asia. \$77 450 — 24 months. COMM-IS.

90-0156 Nutritional surveillance (India)*

To enable the National Institute of Nutrition, Hyderabad, to develop a nutritional surveillance model useful for micro- and macroplanning in India using simple and sensitive indicators. \$204 000 — 36 months. AFNS-IS-SPA.

90-0176 Transitions, public policies, and social demands (Paraguay)

To enable the Centro Paraguayo de Estudios Sociológicos, Asunción, to develop a consistent and integrated package of social policies whose goal is to provide solutions to the most serious problems confronting the country in its transition to democracy. \$227 885 — 24 months. SS-SPA.

90-0191 Oilseeds technology-transfer package (India)*

To permit Tamil Nadu Agricultural University, Coimbatore, to extend and communicate modern oilseeds technologies to potential oilseeds growers and to motivate them to adopt new technologies for greater production and profit. \$63 740 — 36 months. AFNS-COMM.

90-0200 Feeding systems (Senegal)*

For the Institut sénégalais de recherches agricoles, Dakar, to enable the Laboratoire national de l'élevage et de recherches vétérinaires to promote the integration of animal husbandry and agriculture by developing feeding systems based on the use of agricultural wastes and by-products, thereby increasing both meat production and the incomes and technical skills of farmers. \$197 674 — 36 months. AFNS-COMM.

90-0202 Coastal fog application (Chile)

To permit the Corporación Nacional

Forestal-Secretaría Regional de Planificación y Coordinación (IV Región), Santiago, to optimize the coastal fog-collector technology, assess its potential in forestry applications, and develop and implement a marketing strategy, including the preparation and dissemination of a detailed technology package and demonstration activities, aimed at decision-makers in national water authorities, as well as national and international funding agencies. \$173 489 — 25 months. AFNS-COMM-EES.

90-0215 Solar timber dryer (Brazil) — Phase II

For the Fundação Pro-Natureza, Brasília, to enable the Instituto Nacional de Pesquisas da Amazonia to develop a solar timber dryer for use by small-scale industries and sawmills in the Amazon and in other regions with similar conditions. \$135 000 — 24 months. AFNS-COMM.

90-0216 National migration study (Thailand)

For Mahidol University, Nakhon Pathom, to enable the Institute for Population and Social Research to undertake a nationwide survey on the causes of migration, the characteristics of migrants and nonmigrants, migration flows and patterns, and the adjustment and level of satisfaction of the migrants. \$201 950 — 24 months. COMM-SS.

90-0218 Botanical piscicide toxicology (Thailand)

For Chiang Mai University to enable the Faculty of Medicine to determine whether the use of *Swintop* as a piscicide in aquaculture is likely to be associated with risks to human health, through the implementation of a mammalian toxicity-testing protocol, developed in accordance with the guidelines established by the Organisation for Economic Cooperation and Development for the testing of chemicals. \$113 890 — 24 months. AFNS-HS.

90-0227 Upgrading the teaching of information sciences at the University of Papua New Guinea

For the University of Papua New Guinea, Port Moresby, to enable the Department of Library and

Information Studies of the Faculty of Education to provide career-oriented programs in library and information studies. \$175 750 — 36 months. FAD-IS.

90-0228 Upgrading information sciences education in Thai universities

For Chiang Mai University to enable the three major provincial universities — Chiang Mai, Khon Kaen, and Prince of Songkla — to upgrade the teaching of information science in their departments of Library and Information Sciences by offering additional training to faculty teachers. \$140 860 — 36 months. FAD-IS.

90-0232 Load-bearing walls application (Brazil) — Phase II*

To enable the Instituto de Pesquisas Tecnológicas do Estado do São Paulo to transfer the technology resulting from the *Fibre and Agroindustrial By-Products Bearing Walls* project to the Brazilian precast-component manufacturers and contractors. \$95 396 — 12 months. COMM-EES.

90-0236 Promotion of sheep production (Indonesia)*

To enable the Institut Pertanian Bogor (IPB), in collaboration with the Majalengka Livestock Service, the District of Majalengka Development Planning Board, the Cimanuk River Valley Authority, and the Research Institute for Animal Production, to improve the productivity of sheep producers in four villages in the district of Majalengka by making available the results of the IPB-IDRC research project on small-ruminant raising and other relevant research. \$110 526 — 24 months. AFNS-COMM.

90-0244 NGOs in agricultural research (Colombia)

To enable the Centro Latinoamericano de Tecnología Rural, Cali, to coordinate the efforts of the nongovernmental organizations (NGOs), who have emerged as key actors in the dissemination of agricultural technologies to resource-poor farmers, with a view to widening the impact of the NGOs and making the public sector more aware of the needs of resource-poor farmers. \$73 700 — 12 months. AFNS-SS.

90-0263 Three-strata forage (Indonesia) — Phase II

For Universitas Udayana, Denpasar, to enable its Department of Nutrition and Tropical Forage Sciences to increase farmers' incomes through better management of the land under mixed crop-animal systems — grasses and native legumes, shrubs, and fodder trees with goats and Bali cattle. \$83 410 — 30 months. AFNS-OPE.

90-0266 Knowledge for development: adolescent health, sexuality, and pregnancy (Chile)
To enable the Corporación de Salud y Políticas Sociales, Santiago, to provide knowledge, information, and recommendations for the design, implementation, and evaluation of policies and programs related to adolescent sexuality and pregnancy. \$241 500 — 24 months. HS-SS.

90-0279 Technology evaluation, development, and promotion system (the Philippines)
For the University of the Philippines at Los Baños to enable the Research Management Centre to help research institutes, centres, and departments develop the tools, systems, and skills to evaluate research proposals, monitor research projects, and identify mature information and technology. \$61 249 — 24 months. COMM-FAD.

90-0280 Reintegration of returning migrants (Morocco)
To enable the Institut arabe de l'emploi, Tangier, to provide the necessary background information for formulating a policy on the reintegration of returning migrants. Information will be gathered on the adaptability of return migrants, their qualifications, their training needs, their entrepreneurial capacity, and any social and cultural resistance that they might display toward their country of origin. \$125 240 — 36 months. FAD-SS.

90-0283 Return migration and local development in Tunisia*
For the Ministère du plan et du développement régional, Tunis, to enable the Institut de recherches et d'études sur la population to study the effect of return migration on local development, from an economic,

social, and geographic perspective. \$95 420 — 36 months. FAD-SS.

90-0286 International workshop on women and development (Global) — Phase II
For Laval University, Quebec, to enable the Laboratoire de recherches anthropologiques of the Département d'anthropologie to fund an international workshop to train female researchers in the field of women and development. \$77 000 — 12 months. FAD-SS-SPA.

90-0289 Entrepreneurial decentralization (Cuba)*
To enable the Centro de Estudios sobre América, Habana, to examine the process of decentralization currently underway in the country's entrepreneurial system, with reference to the actual level of autonomy of affected enterprises, and to make recommendations for increasing local autonomy and worker participation. \$40 370 — 15 months. FAD-SS.

90-0298 High-temperature equipment application (Latin America)
To enable the Fundação Tecnico-Educacional Souza Marques, Rio de Janeiro, to transfer the technology resulting from the *Industrial Steel Alloys* projects (Phase I and Phase II) and promote its utilization in Brazil, Colombia, and Mexico. \$53 450 — 10 months. COMM-EES.

90-0302 Emigration from the Maghreb and local development in Algeria*
To enable the Laboratoire "économies et sociétés dans les pays du Maghreb," Algiers, to examine the failure of past policies aimed at reestablishing return migrants and make recommendations to facilitate their reinsertion into the economic and social milieu and reinforce their participation in local development. \$112 300 — 36 months. FAD-SS.

90-0307 Agricultural economics capacity (Viet Nam)
For the International Rice Research Institute, the Philippines, to enable Vietnamese academic and government organizations to better understand western economic concepts and the methods of agricultural economists, thus improving their ability to set research

priorities and to assess the impact of technologies and policies. \$105 320 — 24 months. AFNS-FAD.

90-0308 NGO-government linkages (the Philippines)
To enable the International Institute of Rural Reconstruction, Cavite, to identify the preconditions for more successful collaboration between governmental and nongovernmental organizations (NGOs) in natural-resources management. \$40 000 — 9 months. AFNS-SS.

90-0312 Participatory-action research self-study kit (Global)
To enable the Communications and Social Sciences divisions, IDRC, to produce a self-study participatory-action research learning kit consisting of printed materials and a video for governmental and nongovernmental organizations and university staff to improve their skills in employing participatory-action research to achieve community development and education goals. \$85 160 — 18 months. COMM-SS.

90-0324 Gender, environment, and technology (Brazil)*
To enable the Instituto de Estudos Econômicas, Sociais e Políticas de São Paulo to identify the effects of export policies on women and the environment with reference to case studies of jeans manufacturing, sugar-to-alcohol processing, and a third industry yet to be identified. The aim is to develop both industry-specific and general information about the effects of export-led growth. \$135 170 — 18 months. SS-SPA.

90-0328 Sociocultural determinants of AIDS (Zimbabwe)*
For the University of Zimbabwe, Harare, to enable the Department of Sociology to explore and evaluate the effectiveness of alternative approaches to education and counseling for acquired immunodeficiency syndrome (AIDS). Five different strategies will be tested in five communities. \$118 670 — 12 months. HS-SS.

90-0341 Fourth Latin American workshop on applied health-research methods (Nicaragua)*
For the Universidad Nacional Autónoma de Nicaragua, Managua, to enable the Planning Office of the

Faculty of Medicine to strengthen the research capacity of several institutions with a view to improving the design and implementation of research projects related to the health sector and undertaken in collaboration with members of the community. \$63 160 — 6 months. FAD-HS.

90-1000 Hydrogeology (Uganda-Canada) — Phase II
For the Ministry of Water and Mineral Development, Kampala; Makerere University, Kampala; and the University of Toronto, Ontario, to develop water-resource management criteria for input into a national water-management policy that would recognize the interactive nature of groundwater and surface water and incorporate social, economic, and demographic considerations so as to ensure sustainable use of this essential resource. \$564 436 — 36 months. EES-SS.

90-1017 Research management (Zimbabwe-Canada)*
To enable the University of Zimbabwe, Harare, with the assistance of the University of Manitoba, Winnipeg, to offer two courses for middle-level research managers and project leaders and to strengthen the managerial capabilities of the National Agricultural Research System and the Department of Agricultural Economics of the University in delivering managerial courses in agricultural research and related fields. \$94 200 — 24 months. AFNS-FAD.

90-1021 Gold in laterites (Mali-Canada)*
For the Ministère de l'industrie, de l'hydraulique et de l'énergie, Mali, and the École polytechnique de Montréal, Quebec, to improve the exploration for and exploitation of gold in laterites by gold washers, mainly in Mali. \$432 702 — 60 months. EES-FAD.

90-1032 Mollusc Culture Network coordination (Global-Canada) — Phase II
For Dalhousie University, Nova Scotia, to provide coordination and support for the 10 projects of the Mollusc Culture Network and to facilitate effective interaction and project development. \$501 400 — 48 months. AFNS-FAD.

90-1034 Integrated fish farming (China-Canada) — Phase II*
To enable the Ministry of Agriculture, Animal Husbandry and Fisheries, China, in collaboration with the Asian-Pacific Regional Research and Training Centre for Integrated Fish Farming, China; the Freshwater Institute, Manitoba; and Saint Mary's University, Nova Scotia, to establish the scientific and economic criteria for successful fish production in manure-loaded ponds, so as to facilitate the adaptation and implementation of integrated fish-, livestock-, and crop-farming technology in areas with different agroclimatic and socioeconomic conditions. \$574 700 — 48 months. AFNS-FAD-HS-SS.

90-1037 Summer institute on gender and development (Global-Canada) — Phase III
To enable Saint Mary's University, Nova Scotia, to conduct a 1-month summer institute with the goal of upgrading the capability of students to conduct or supervise high-quality social-science research on women and gender relations. \$59 980 — 12 months. FAD-SS.

90-1043 Award for young Canadian journalists
To enable the Fellowships and Awards Division, IDRC, to encourage Canadian journalists to report on developing-country issues in a more informed, aware, and sensitive way by providing them with an opportunity to gain first-hand experience in the Third World with a news agency specializing in international development. \$46 000 — 24 months. COMM-FAD.

Social Sciences¹⁰

90-0005 Rural informal sector (Tanzania)*
To enable the University of Dar es Salaam to conduct a pilot census in representative regions of Tanzania to determine the size of the rural informal sector and the relative importance of its various activities. \$125 740 — 30 months.

¹⁰ Projects funded jointly with another division are listed under "Multidivisional."

90-0012 Low-income rental housing in Bangkok (Thailand)
To enable the Asian Institute of Technology, Bangkok, to assess the character and importance of low-income rental housing in Bangkok and to formulate proposals to increase the supply of such housing. \$80 710 — 18 months.

90-0020 Deforestation and reforestation (Senegal)
For the Université Cheik Anta Diop, Dakar, to enable the Institut des sciences de l'environnement to improve the living conditions of the population by controlling deforestation through a study of the factors involved in deforestation and the impact of reforestation. \$57 506 — 18 months.

90-0025 Education and work: problems and research trends for the 1990s (Argentina)
To enable the Centro de Estudios de Población, Buenos Aires, to study the changes occurring in the labour market and in the relationship between education and work so as to identify specific policy-relevant areas of research. The effects of similar transformations in other Latin American countries will also be examined. \$99 480 — 24 months.

90-0038 Science and technology education in Kenyan schools
For Kenyatta University, Nairobi, to enable the Department of Educational Communication and Technology to improve the quality and effectiveness of science and technology education with a view to increasing its impact on societal development goals. \$100 140 — 24 months.

90-0043 Financial markets (Senegal)
To enable the Centre africain d'études monétaires, Dakar, to investigate imperfections in the country's financial markets and the influence of these on the financial strategies of Senegalese business firms. Policy recommendations will be made on how to improve financial markets. \$17 355 — 9 months.

90-0048 Management of solid wastes (Ecuador)
For Fundación Natura, Quito, to establish a base for improving management of solid waste with the overall goal of reducing the effects of

pollution on human health and on the quality of life. \$156 620 — 18 months.

90-0062 Adjustment, recession, and growth (Bolivia)

For the Universidad Católica Boliviana, La Paz, to enable the Instituto de Investigaciones Socioeconómicas to analyze the factors that promote or hinder macroeconomic stability and that have kept the economy from moving beyond stabilization to growth and to devise policies that will help put the economy on a medium- or high-growth path. \$115 500 — 36 months.

90-0065 Small-business credit evaluation (Peru)

To enable the Alternativa Centro de Investigación Social y Educación Popular, Lima, to assess the economic impact of its credit program on its recipients in terms of management, organization, production, marketing, and revenues. \$28 140 — 12 months.

90-0066 Management and organization of informal-sector enterprises (Peru)

To enable the Centro de Estudios e Investigación Regional, Arequipa, to analyze the microentrepreneurs' performance in *pueblos jóvenes* of metropolitan Arequipa, in particular their socioeconomic characteristics, management skills, and forms of organization as demonstrated in their economic activities; and to assess experience so as to guide the design and elaboration of alternative training through educational programs aimed at low-income microentrepreneurs. \$48 670 — 12 months.

90-0084 Informal sector in an urban economy (India)

To enable the Institute of Development Studies, Jaipur, to identify the "strengths" of selected activity groups in the informal sector and to formulate an intervention strategy to assist them. \$18 570 — 18 months.

90-0085 Indicators on quality of education in Latin America

To enable the Oficina Regional de Educación para América Latina y el Caribe of Unesco, Chile, to design, develop, and test a system for measuring and improving educational

quality at the primary-school level in selected Latin American countries. \$138 900 — 24 months.

90-0087 Black urbanization, class differentiation, and political conflict (South Africa)

For the University of Durban-Westville, Durban, to enable the Institute for Social and Economic Research to develop an understanding of the underlying causes of violence in the residential areas surrounding Durban so that appropriate constructive responses can be formulated and implemented by the parties to the Natal peace initiative and the local communities concerned. \$153 000 — 36 months.

90-0088 Commission on the role of developing countries in the face of global change (Global)

For the Social Sciences Division, IDRC, to increase understanding of the importance of global environmental change to developing countries and the potential of the social sciences in identifying means to avoid, limit, or adjust to problems caused by global change. \$187 750 — 22 months.

90-0094 Culture and education among Quechuan populations (Ecuador)

To enable the Corporación Educativa "Macac," Quito, to collect and analyze information pertaining to the Quechuan understanding of the role of women in the community and its organization so as to improve educational programs directed toward Quechuan-speaking populations. \$52 780 — 18 months.

90-0109 Spatial mobility of population: emerging issues in Latin America

To enable the Centro de Estudios de Población, Argentina, to identify and assess emerging forms and trends in spatial mobility in Latin America to identify the new patterns, their determinants, and their consequences. The ultimate goal is to identify new policy and research issues related to the impact of spatial mobility on the use of human resources in development. \$48 000 — 16 months.

90-0120 Toward locale-specific environmental education (India)

To enable the Centre for Environmental Education (CEE),

Ahmedabad, to test the overall workability and feasibility of using a data bank of environmental information to create locale-specific educational programs; to evolve systems for setting up such a data bank on a country-wide basis at CEE centres in state capitals and, as requested, at other nodes throughout India; and to test specific premises and assumptions made while designing the system. \$139 500 — 24 months.

90-0121 Financial markets and inflation (Argentina) — Phase V

To enable the Centro de Estudios de Estado y Sociedad, Buenos Aires, to analyze the impact of the recent hyperinflationary episodes on the process of savings, investment, and finance in Argentina, and to evaluate different short- and long-term policy alternatives for the recovery of stability and growth in the economy. \$179 100 — 36 months.

90-0138 Sustainable futures (Thailand)

For the Thailand Development Research Institute, Bangkok, to improve natural resources management for Thailand's sustainable economic development. \$186 260 — 36 months.

90-0145 Political economy of structural adjustment (Turkey) — Phase II

To enable the Turkish Social Science Association, Ankara, to assess the distributional and political impact of the current mix of structural adjustment and neopopulist policies in Turkey, with a view to identifying some more equitable and sustainable alternatives. \$112 090 — 24 months.

90-0150 Farm investment behaviour (Egypt)

For Mansoura University to enable the Regional Center for Planning and Development to better understand private investment behaviour in agriculture in Egypt to suggest ways to render it more efficient and responsive to societal needs. \$83 530 — 24 months.

90-0152 Financial liberalization (Africa)

To enable the African Centre for Monetary Studies, Senegal, to explore and assess the potential contributions and limitations of

financial liberalization in the current African context. \$131 810 — 12 months.

90-0154 Gender in the urban informal sector (Honduras)
To enable the Centro de Estudios y Promoción del Desarrollo, Tegucigalpa, to determine those urban informal-sector components where gender operates as an organizing variable. \$110 860 — 22 months.

90-0158 Urbanization and urban management in Morocco
To enable the Association de recherche de l'école nationale d'architecture, Rabat, to produce a compendium of data on the urban policy of Morocco, including its deficiencies, its internal inconsistencies, and its incongruities, and to introduce the theoretical and operational bases of a rational urban-management program. \$91 640 — 14 months.

90-0162 Indian agendas for tropical-forest protection (Colombia)
To enable the Centro de Cooperación al Indígena, Bogotá, to investigate the broad potential for applying traditional Indian models of forest protection in Colombia. \$63 000 — 12 months.

90-0177 Peasant agricultural systems and the environment (Latin America)
For the Grupo de Investigaciones Agrarias, Chile; the Centro Andino de Acción Popular, Ecuador; and the Universidad Nacional de San Antonio Abad del Cusco, Peru, to analyze the relationship between peasant agricultural systems and the environment in Chile, Ecuador, and Peru in areas in which the rural peasant population is significant and in which different levels of incorporation into market structures both within and between communities can be observed. \$330 860 — 36 months.

90-0187 Migration and urbanization in West Africa
For the Centre d'études et de recherches sur la population et le développement, Mali, to allow a network of about 15 institutions in seven West African countries to carry out a detailed study of the flow, directions, and socioeconomic and

political consequences of migration and urbanization. \$408 031 — 48 months.

90-0205 Municipal development program (sub-Saharan Africa)*
To permit the Municipal Development Program Facility, USA, to support African institutions to undertake policy-oriented, comparative research on local governance and municipal development, as part of a broad program aimed at strengthening local capacity to provide basic infrastructure and services to urban populations in sub-Saharan Africa. \$250 000 — 27 months.

90-0209 Toward the single city: Johannesburg and Soweto (South Africa)*
For Planact, Johannesburg, to investigate the economic, financial, and administrative operations of the greater Johannesburg-Soweto local-government structures, a city currently divided under apartheid, with a view to developing "single city" alternatives. \$45 750 — 18 months.

90-0210 Urban environment network (West Africa)*
To allow the Institut africain de gestion urbaine, Senegal, to improve knowledge of and practices in urban management in Africa through the eventual establishment of a research and expertise network to produce elements to help decision-making that will lead to mastering urban development. \$272 350 — 36 months.

90-0214 Technological behaviour under structural adjustment (Argentina, Brazil, and Mexico)
For the Centro de Investigaciones para la Transformación, Argentina, to examine the ways in which manufacturing enterprises in Argentina, Brazil, and Mexico have adapted to changes in the environment for technology imports during the 1980s, due to shifts in investment flows, in macroeconomic and trade policies, and in the regulatory framework in recipient countries. \$291 200 — 36 months.

90-0221 Land values and equity in shelter development (Kenya)
For the University of Nairobi to enable the Department of Geography to analyze the major determinants of land values in low- and middle-

income urban residential neighbourhoods with a view to determining the influence of current state policies on the availability of land for low-income housing. \$53 930 — 24 months.

90-0222 Economic implications of Egypt's external debt
To enable the Arab Centre for Development and Future Research, Cairo, to investigate the feasibility for Egypt to eliminate or greatly reduce its external debt by the end of 1990s within the existing domestic and international economic context and to examine and compare the relative effectiveness of the various options open to Egyptian economic policymakers in endeavouring to reach this goal. \$36 640 — 17 months.

90-0230 Public enterprise efficiency (Sudan)
For Kimsas Global Limited, Khartoum, to enable the Faculty of Economics of the University of Gezira to study the efficiency of public enterprises in Sudan. \$21 240 — 12 months.

90-0237 Traditional and modern wetland-resource management (Brazil)*
For the Universidade de São Paulo to enable the Instituto Oceanográfico to analyze the relationship between local communities and the wetland ecosystems so as to provide governmental and nongovernmental agencies with guidelines for protecting the Marituba floodplain and the Mamanguape mangrove area and encouraging sustainable development and to promote better conservation of the wetland ecosystem by local communities. \$210 450 — 24 months.

90-0240 Small-scale industries in the Azuay region (Ecuador)
To enable the Fundación Austral de Promoción y Desarrollo Social, Quito, to determine the factors influencing the small-scale industrial sector as it adapts to the economic crisis, and to discover why, in spite of unfavourable conditions, the number of small-scale enterprises is on the rise. \$35 000 — 12 months.

90-0248 Stabilization and growth (Brazil)
For the Pontificia Universidade

Católica, Rio de Janeiro, to enable the Department of Economics to analyze the achievements and future of the government's policies for stabilization and structural reform and to propose alternatives where deemed necessary. \$180 000 — 36 months.

90-0253 Evaluation of adult basic-education programs (Ecuador)

To enable the Centro de Educación y Promoción Popular, Quito, to develop mechanisms for monitoring and evaluating the new adult basic-education program so as to ensure its continued relevance and ability to impart critical awareness and specific language and mathematics skills. \$75 120 — 20 months.

90-0255 Knowledge for development: institutional networking and distance education (Peru)

To enable the Instituto de Investigación Nutricional and the Universidad Peruana Cayetano Heredia, Lima, to promote the knowledge and use of available means of reducing fertility and infant malnutrition and the establishment of relations between local organizations and scientific institutions. \$183 925 — 18 months.

90-0257 Room rental: collective strategies and policy recommendations (Argentina)

To enable the Programa "Habitat," Buenos Aires, to analyze the evolution of the submarket in rooms in tenement houses and hotels in the city of Buenos Aires during 1986–1991, including its links with the illegal market, and to make recommendations for improving the situation. \$74 110 — 18 months.

90-0262 Learning system for "Education for All" (the Philippines)

To enable the Regional Center for Educational Innovation and Technology of the Southeast Asian Ministers of Education Organization, Quezon City, to improve the efficacy of primary (elementary) education by providing alternative approaches and learning methods for potential drop-outs. \$193 350 — 42 months.

90-0264 Population, traditions, and development in western Côte d'Ivoire

For the Université nationale de Côte d'Ivoire, Abidjan, to enable the Institut de géographie tropicale to show the role of sociocultural traditions and behaviour in implementing development projects in the Man Region of western Côte d'Ivoire. \$75 000 — 12 months.

90-0273 Macroeconomic policy and the popular classes (Ecuador)

To enable the Facultad Latinoamericana de Ciencias Sociales, Quito, to determine whether and to what extent the low-income groups in the Andean region are negatively affected by changes in the modern macroeconomy. \$45 500 — 18 months.

90-0277 Capacity building in educational research and policy analysis in sub-Saharan Africa

To enable the Social Sciences Division, IDRC, to carry out a critical review and assessment of the status of capacity-building in educational research and policy analysis in sub-Saharan Africa. \$83 220 — 18 months.

90-0281 Urban violence: structural factors and public response (Ecuador-Peru)

To enable the Centro de Estudios Regionales, Guayaquil, and the Centro de Estudios y Promoción del Desarrollo, Lima, to identify major trends in urban delinquency and criminality in the two cities during the 1980s, with particular reference to the contributing factors, and to make policy recommendations aimed at improving the situation. \$61 070 — 18 months.

90-0293 Impact of liberalization (Nigeria)*

For the Nigerian Institute of Social and Economic Research and the Social Science Council of Nigeria, Ibadan, to establish a national network of policy-oriented research that will look at liberalization as it relates to such themes as the distribution of political power, social mobility, education and employment, the environment, technological progress, economic self-reliance, and food security. \$404 320 — 42 months.

90-0296 Regional follow-up in "Education for All" (Global)*

For the Southeast Asian Research Review and Advisory Group, Malaysia; Unesco's Oficina Regional de Educación para América Latina y el Caribe, Chile; and the Educational Research Network for Eastern and Southern Africa, Tanzania, to support research and research-related activities on basic education within the framework of the "Education for All" initiative. \$207 300 — 24 months.

90-0301 Environmental impact of banana activity in Costa Rica: a case for the International Water Tribunal 1992

To enable the Fundación Guilombé, San José, in collaboration with the Universidad Nacional de Heredia, the Instituto Tecnológico de Costa Rica, the Organización de Estudios Tropicales, and the Universidad de Costa Rica, to determine the environmental impact of banana production on the aquatic ecosystem of the Estrella River basin (including the coral reef area of Cahuita National Park) and on the people of the region, and to evaluate the legal, economic, social, and political environment in which the banana industry operates with a view to identifying changes in public policy and plantation management that could reduce the environmental impact associated with the industry. \$50 070 — 18 months.

90-0304 Science and technology policy (Lao People's Democratic Republic)

To enable the Ministry of Science and Technology, Vientiane, to undertake a process of national-policy planning and capability building in the management of sciences and technology. \$99 720 — 12 months.

90-0311 Savings mobilization (West Africa)*

To enable the African Centre for Monetary Studies, Senegal, to better understand savings mobilization in West Africa, with special attention to the potential of national savings to meet gross investment needs and the likely trend of national savings rates under economic reforms. \$31 840 — 12 months.

90-0313 The new generation: innovative teaching for Lebanese youth*

To enable the Educational Office of the Congrégation des Saints-Coeurs de Jésus et de Marie, Beirut, to identify the social values and cultural ideals shared by Lebanese youth whatever their religious, social, or ethnic background and to lay the foundation for a new educational approach based on a national sense in a multicultural society. \$118 720 — 24 months.

90-0321 Educational research awards (Kenya, Tanzania, and Uganda) — Phase II*

To enable Kenyatta University College, Nairobi, the University of Dar es Salaam, and Makerere University, Kampala, to provide training and support for 15 researchers in Kenya, Tanzania, and Uganda and consolidate the achievements of the first phase by strengthening the selection process, training, supervision, and coordination. \$243 710 — 18 months.

90-0333 Economic liberalization and structural reform (Colombia)*

To enable the Fundación para la Educación Superior y el Desarrollo, Bogotá, to analyze the effects of the recent and ongoing liberalization and restructuring of the economy on financial markets, exports, and the poor. \$241 540 — 36 months.

90-0335 Ancestral land rights: status and prospects (the Philippines)

To enable the Center for Development Programs in the Cordillera, Baguio, to carry out research on the different types of collective rights of indigenous peoples to ancestral land and on the relationship of these rights, both historic and current, to state law. \$16 880 — 18 months.

90-0337 Transportation policy in Mexico City: evolution and environmental consequences

To enable the Colegio de México, México DF, to define a range of feasible policy options for managing public transportation in Mexico City in such a way as to meet the joint objectives of satisfying the demand and reducing air pollution. \$78 980 — 24 months.

90-0338 Adding an environmental component to LEAP (Senegal)*

For Environnement et développement du tiers-monde, Dakar, to demonstrate the potential of extending the Long-Range Energy Alternatives Planning System (LEAP), a well-known energy policy model, to include an environmental dimension. \$34 760 — 15 months.

90-0354 Microimpacts of macroeconomics adjustment policies (the Philippines)*

To enable the Philippine Institute for Development Studies, Makati, to develop macroeconomic policies that would account for the impact of such policies on poorer communities, thereby promoting the objectives of stabilization and structural adjustment. \$149 400 — 12 months.

90-1006 Environmental issues in Uganda (Uganda–Canada)

For Queen's University, Ontario, to enable the Group for Studies in National and International Development in collaboration with the Makerere Institute for Social Research to fund 16 junior research grants of 1 year's duration and \$5 000 each for social-science research on environmental issues. \$188 500 — 24 months.

90-1012 Toward a sustainable development strategy for the Sierra de los Tuxtlas (Mexico–Canada)

To enable the Centro de Estudios Agrarios, Xalapa, and Carleton University, Ontario, to generate the necessary information and analyses for formulating a sustainable social and economic development strategy for a bioeconomic reserve in the Sierra de los Tuxtlas, Veracruz. \$226 270 — 24 months.

90-1013 North American economic integration (Mexico–Canada)

To enable the Colegio de México, México DF, and Carleton University, Ontario, to analyze the economic and political feasibility of either free trade or sectoral trade agreements among Mexico, Canada, and the USA. \$113 005 — 24 months.

90-1027 Technology import and transfer (China–Canada)*

To enable the Jiangsu Academy of Social Sciences, China, and

University of British Columbia, Vancouver, to explore and examine the process by which technology is acquired, assimilated, and diffused in China. \$149 875 — 36 months.

90-1046 Evictions and the right to housing (Global–Canada)*

To enable the Centro de Estudios Sociales y Educación, Chile; the Secretario Ejecutivo–Ciudad Alternativa, Dominican Republic; the Urban Poor Research Institute, Korea; Habitat International Coalition, Mexico; Planact, South Africa; and the University of British Columbia, Vancouver, to undertake a comparative analysis of evictions in the six countries involved with a view to raising public awareness of the problem and preparing organizations to respond more effectively. \$175 817 — 12 months.

Special program activities¹¹**90-0023 Weaning practices (India)**

To enable the World Food Programme, New Delhi, to improve health and nutrition for poor women and children (0–6 years). \$30 040 — 12 months. AFNS.

90-0044 Income, employment, and education of rural women in northern Thailand

To enable Chiang Mai University to examine the relationship of income and employment opportunities, information, and education investments for rural women in Thailand. \$70 030 — 18 months. SS.

90-0055 Women and social forestry (India)

For the Society for Participatory Research in Asia, New Delhi, to enable the Institute for Socio-Economic Development to analyze social forestry programs in Orissa and Madhya Pradesh states, with a primary focus on the participation of poor women. \$22 140 — 18 months. SS.

¹¹ Administering divisions are AFNS = Agriculture, Food and Nutrition Sciences; HS = Health Sciences; and SS = Social Sciences.

90-0092 Malnutrition of Mauritanian refugees

To enable Environnement et développement du tiers-monde, Senegal, to research the causes preexisting or favouring malnutrition and to evaluate their frequency so that immediate action can be taken to eliminate this plague if its causes are determined. \$21 998 — 6 months. HS.

90-0135 Industrial restructuring and gender subordination in Latin America

To enable the Facultad Latino-americana de Ciencias Sociales, Argentina, to empower women by providing information that will allow them to renegotiate issues that keep them in a subordinate position in the household and to develop leadership skills among women to encourage collective action and political mobilization to seek social change with respect to their role in society. \$52 000 — 15 months. SS.

90-0173 Global nutrition reporting*

To enable the Administrative Committee on Coordination — Subcommittee on Nutrition, Switzerland, to report extensively on trends in malnutrition and selected causal factors in several countries during 1991–1995 and provide information for nutrition planning at national and international levels. \$218 400 — 60 months. AFNS.

90-0223 Gender-analysis training (Global)

To enable the Social Sciences Division, IDRC, to adapt and validate a methodology for gender analysis that can be incorporated as an analytical component of on-going farming systems research projects and to disseminate this methodology by means of workshops in all areas of IDRC's operations. \$50 000 — 24 months. SS.

90-0265 Public-sector employment (Argentina) — Phase II

To enable the Centro de Estudios y Sociedad, Buenos Aires, to gain a better understanding of the pattern of gender discrimination and segregation affecting highly educated men and women in two types of employment: producer services

(banking, insurance, etc.) and social services (education and health). \$35 000 — 15 months. SS.

90-0350 Gender-sensitive nonformal adult-education policy (South Africa)*

For the University of the Western Cape, Bellville, to enable the Centre for Adult and Continuing Education to undertake research into developing a nonformal, gender-sensitive adult-educational policy for a postapartheid South Africa. \$120 130 — 18 months. SS.

Divisional activity projects

Apart from the activities listed in the preceding pages, IDRC funds many small-scale projects designed to support, in one way or another, the activities in progress in the divisions. These are such things as promoting workshops or seminars on the research priorities in a given region or topic, enabling researchers from developing countries to participate in meetings of experts in various parts of the world, or making it possible for specialists to visit and assist a project team in another country. There are also funds available to IDRC's regional offices to support activities in their respective regions.

Most division activity projects cover the cost of meetings or of consultations directly or indirectly connected with IDRC-funded research. During the past fiscal year, IDRC approved divisional activity projects to a total cost of \$6.5 million. The following are examples.

- A comprehensive review of existing knowledge concerning technical, socioeconomic, and institutional aspects of wildlife management in eastern and southern Africa was supported. A major component of the review was a comparison of livestock, wildlife, and mixed production–land use systems. The information gathered will provide a sound basis for future IDRC support to wildlife management research.
- IDRC has, over the past 10 years, supported some 30 projects in 10 countries on bamboo and rattan

research; most of these projects have been linked in an informal network. To strengthen the international support, a study was commissioned to assemble information on past research on bamboo and rattan, identify lacunae in ongoing research, and further explore and articulate institutional options for a bamboo and rattan research network.

- Technical developments in biotechnology, and trends toward privatization of research and intellectual property, have serious ethical and economic implications and strong potential influence in the arena of international development and international development research. In an effort to contribute to the resolution of important issues in this area, IDRC hosted, and supported participation of representatives from developing-country and nongovernmental organizations (NGOs) in, a consensus-seeking dialogue on intellectual property protection. The workshop was a part of the prestigious "Keystone Dialogue Series on Plant Genetic Resources."
- A pilot study was supported as the basis of a proposed larger study to examine a sample of returned migrants to the Philippines to identify the types of small-scale enterprises in which they have ventured and the factors accounting for the success or failure of their enterprises. The pilot study was used to refine research methods and to develop and test research instruments for use on a broader scale.
- A 3-day workshop was funded to improve cooperation among West African NGOs with respect to the nature of sustainable development in the region. The task was to analyze the role of the multilateral and bilateral donor agencies that invest in West Africa. Specific areas of concern included tropical rain-forest management, marine issues and fishing, air pollution from vehicles and industry, pesticide use and agriculture, and renewable energy and energy efficiency particularly in the context of global warming.

- A consultant from Thailand was commissioned to assist the Lao Literacy and Adult Education Department in developing a postliteracy program for improvement of life quality through nonformal education and to conduct a review of educational research priorities and capability in Laos.
- In Swaziland, a workshop organized by the Southern African Centre for Cooperation in Agricultural Research (SACCAR) formulated a plan of action for establishing an agricultural information system for the region.
- Sabbatical support enabled the Chief Librarian of Universiti Pertanian Malaysia to study the sustainability of information systems and services in developing countries drawing on the experience of IDRC projects.
- IDRC has supported more than 20 projects in the geomatics field involving mapping, remote sensing, and geographic information systems. An external consultant was retained to evaluate this program and advise on future directions.
- IDRC-supported research has resulted in a number of technologies that address basic human needs. A consultancy was provided to "search India" to define a long-term strategy for disseminating and marketing the technologies.
- A consultant was hired to identify the potential for the transfer of technologies resulting from five IDRC projects. The consultant has identified at least two countries where the potential for the transfer of technology exists.
- A consultancy was provided to assist the Women's Association and the Ministry of Science and Technology in Laos in gathering the necessary socioeconomic and technical background information to produce a detailed proposal on the local silk industry.
- Two consultancies were awarded to support a study of groundwater supply for the city of Santa Marta from the Universidad de los Andes. A civil engineer, familiar with hydrogeology and sanitary engineering, and an economist, experienced in socioeconomic analysis, worked to clarify the socioeconomic context of the Santa Marta artificial recharge proposal.
- The IDRC-TDR Award — Women and Tropical Diseases — will provide support for a joint IDRC-WHO prize of \$5 000 for a paper on the topic of women and tropical diseases. Essays on the socioeconomic factors involved with women's susceptibility to tropical diseases will be invited from researchers in different parts of the world.
- Four divisions contributed funds to bring together IDRC researchers and other developing-country experts to a symposium held in Ottawa on the "Impact of Pesticide Use on Health in the Developing Countries." The symposium, which was an outstanding success, was organized by the Health and Environment Program of the Health Sciences Division in collaboration with the International Commission on Occupational Health (ICOH).
- A project development workshop was organized in Montevideo, Uruguay, to assist four teams of Latin American researchers finalize their research project proposals with emphasis on the methodology of health systems research for submission to the Centre. Technical assistance and advice were provided by two consultants and two divisional representatives.
- A global tracer study was undertaken of former Fellowships and Awards Division-supported awardees. The objective of the study was to follow up and elicit information from former grantees, analyze and interpret the returned information, and draw policy and program implications from the data.
- A study was supported to explore directions and interpretations relating to human resources development and the strengthening of self-sustaining research and training institutions in the area supported by the Regional Office for Eastern and Southern Africa.
- A consultant conducted a case study of the Consortium Graduate School of the University of the West Indies that provided qualitative information for a comprehensive analysis of institution-building efforts undertaken by IDRC.

Fellowships

Awards given to researchers from the South

IDRC often trains Third World scientists working in development. The emphasis is on professional upgrading, rather than basic training, so that scientists may carry out high-quality research and improve the functioning of their institutions.

IDRC's training programs are intended to support the needs of the indigenous research community. Possible trainees are identified from within IDRC-funded projects and institutional networks. Specifically, the focus is on short-term, specialized training; graduate-degree training; and scholarly exchanges.

Program-related award

Almillategui, José G. (Panama)
Undertake a master's of science degree in animal production; Facultad de Agronomía, Pontificia Universidad Católica de Chile, Santiago, Chile

Chaparro, Oscar (Chile)
Undertake studies toward a doctoral degree in ocean science; Department of Aquaculture, Ocean Sciences Centre at Memorial University of Newfoundland, Saint John's, NF, Canada

Chavunduka, Davis T. (Zimbabwe)
Undertake a master's degree in sociology of health care; Department of Sociology, University of Warwick, Coventry, West Midlands, UK

CIEP (Uruguay)
Allow 10 students from Uruguay to complete studies at the master's level [Abella, Gonzalo; Chiesa, Patricia; Denis, Mercedes; Ferreira, Zoa; Marrero, Adriana; Oancea, Lourdes; Ruiz, Mabel; Viera, M. del Carmen; Villagran, Alberto; Viola, Roberto]; Centro de Investigación y Experimentación Pedagógica (CIEP), Montevideo, Uruguay

Dang, Thanh Ha (Viet Nam)
Undertake a master's degree in agricultural economics; University of

the Philippines, Los Baños, the Philippines

Dao, La Xuan (Viet Nam)
Undertake a master's degree in agricultural economics; University of the Philippines, Los Baños, the Philippines

Erone, Emongor V. (Kenya)
Undertake a doctoral degree in crop science (horticulture); Department of Agriculture, University of Guelph, Guelph, ON, Canada

Fernandez, Ruben (Bolivia)
Undertake studies toward a master's degree in sciences (silviculture); Universidad Austral de Chile, Valdivia, Chile

Guerfi, Mokhtar (Algeria)
Undertake an internship to increase his knowledge as a teacher scientist; Sherbrooke University, Sherbrooke, PQ, Canada

Hidalgo, Roberto (Ecuador)
Participate in the 31st seminar on international strategies, industrial politics, and technologies; Instituto Latinoamericano y del Caribe de Planificación Económica y Social, Santiago, Chile

Hong, Minh Kim (Viet Nam)
Undertake a master's degree in agricultural economics; University of the Philippines, Los Baños, the Philippines

Jairath, Jasveen (India)
Undertake a postdoctoral program on technology policy and innovation management; Maastricht Economic Research Institute on Innovation and Technology, Maastricht, the Netherlands

Kajuna, Silas T.A.R. (United Republic of Tanzania)
Undertake a doctoral degree in postharvest technology; Department of Agriculture, Guelph University, Guelph, ON, Canada

Khiem, Nguyen Tri (Viet Nam)
Undertake studies leading to a doctoral degree in agricultural economics; Department of Agricultural Economics, University of the Philippines, Los Baños, the Philippines

Lamichhane, Shreeram (Nepal)
Undertake field work for an analysis of perspectives on nonformal education in Nepal; Research Centre for Educational Innovation and Development, Tribhuvan University, Kathmandu, Nepal

Luu, Duc Hai Thanh (Viet Nam)
Undertake a master's degree in agricultural economics; University of the Philippines, Los Baños, the Philippines

Mahidol University (Thailand)
Enable the institute to conduct the two training courses in community nutrition for 13 participants [Dharmasena, M.D.; Hassan Kalinle, Faiza; Phitthanousone, C.H., Souraxay, M.; Xue Yimin; Zhou Xiangli; and seven others]; Institute of Nutrition, Mahidol University, Nakhon, Thailand

Mutika, Frédéric (Senegal)
Undertake graduate studies toward a certificate in infectious and tropical diseases; Faculty of Medicine, Université Cheikh Anta Diop, Dakar, Senegal

Nganda, Benjamin Musembi (Kenya)
Undertake a doctoral degree in health economics; Department of Economics, University of York, York, UK

Nguluma, Alex T. (United Republic of Tanzania)
Complete a doctoral dissertation on technology transfer; Institute of Development Studies, University of Nairobi, Nairobi, Kenya

Ong, Virginia Garcia (the Philippines)
Attend a training course on "Information repackaging and consolidation"; Library and Regional Documentation Center, Asian Institute of Technology, Bangkok, Thailand

Ponce del Castillo, Victoria (Peru)
Undertake studies toward a master's degree in community health; Universidad Peruana Cayetano Heredia, Lima, Peru

Rojas, Luis G. (Peru)
Undertake studies toward a master's

degree in educational administration; University of New Mexico, Albuquerque, NM, USA

Rungnapar, Vongvijitra (Thailand)
Undertake the premaster's English program; Asian Institute of Technology, Bangkok, Thailand

Sow, Ababacar (Senegal)
Purpose : Attend an agricultural research management course; Centre de coopération internationale en recherches agronomiques pour le développement, Marseilles, France

Thong, Le Quang (Viet Nam)
Undertake master's degree in agricultural economics; University of the Philippines, Los Baños, the Philippines

Touré, Cheikhou Oumar (Senegal)
Undertake preparatory studies toward a master's degree in forestry; Forestry Department, Laval University, Ste-Foy, PQ, Canada

Touré, Seydou Nourou (Senegal)
Undertake an internship in the Agricultural Economics Department; Agricultural Economics Department, Manitoba University, Winnipeg, MB, Canada

Zagaré, Guy M.L. (Senegal)
Undertake graduate studies leading to a State doctoral degree; École inter-états des sciences et médecine vétérinaire, Dakar, Senegal

Project-related award

Azagoh Kouadio, Marie-Christine (Côte d'Ivoire)
Undertake graduate studies toward a doctoral degree; Faculty of Arts and Humanities, Sherbrooke University, Sherbrooke, PQ, Canada

Bayogan, Emma Ruth V. (the Philippines)
Undertake studies for a doctoral degree in horticulture; University of the Philippines, Los Baños, the Philippines

Campilan, Dindo M. (the Philippines)
Attend a course on "Information repackaging and consolidation"; Library and Regional Documentation Centre, Asian Institute of Technology, Bangkok, Thailand

Data, Emma (the Philippines)
Undertake postdoctoral training and research on postharvest technology; Horticulture Department, University of Georgia, Athens, GA, USA

Dia, Mohamed (Guinea)
Undertake an internship to strengthen his capacity in geotechnics; École nationale d'ingénieurs de Sfax, Sfax, Tunisia

El-Shafey, Moines H.A. Naser (Egypt)
Undertake graduate studies leading to master's degree in geographic information systems; Department of Surveying Engineering, University of New Brunswick, Fredericton, NB, Canada

Essoh Tiapani, Nandjo L. (Côte d'Ivoire)
Undertake studies leading to a master's degree in demography; University of Montreal, Montreal, PQ, Canada

Gaye, Cheick Becaye (Senegal)
Complete the writing of a thesis toward a doctoral degree in geology; Université de Paris-Sud, Orsay Cedex, Paris, France

Gikenye, M.W. (Kenya)
Attend the course on bibliographic information on development; Department of Library Sciences, University of Sussex, Brighton, Sussex, UK

Goma, Isabelle (Congo)
Undertake an internship in the field of nutrition; Université Cheikh Anta Diop, Dakar, Senegal

Gustiano, Rudhy (Indonesia)
Undertake master's degree in science specializing in zoology; University of Singapore, Singapore

Housseynatou, Barry (Guinea)
Undertake an internship in project and enterprise management; École supérieure de gestion (CESAG), Dakar, Senegal

Kallon, Michael (Sierra Leone)
Undertake a master's degree in social sciences (education research); Department of Education, Queen's University, Kingston, ON, Canada

Kamasho, Josephat A. (United Republic of Tanzania)
Undertake doctoral studies in

agrogeology extension; University of Guelph, Guelph, ON, Canada

Kaye, Madi Allafi Agnes (Bénin)
Undertake master's degree studies in social anthropology; Université nationale du Bénin, Cotonou, Benin

Koala, Peam (Papua New Guinea)
Support attendance in the regional training course on training methods; Asia and Pacific Programme for Development Training and Communication Planning, Manila, the Philippines

Lo, Henri Mathieu (Senegal)
Undertake an internship in land entitlement and natural resources management; University of Wisconsin, Madison, WI, USA

Mlozi, Malongo R.S. (United Republic of Tanzania)
Undertake a doctoral degree in agricultural education and extension; Department of Agriculture, University of British Columbia, Vancouver, BC, Canada

Muquingue, Humberto C. (Mozambique)
Support travel to Ismailia, Egypt, to attend a course on the "Identification of Research Priorities and Development of Proposals"; Department of Epidemiology, Suez Canal University, Cairo, Egypt

Okoth, Brigitte Kidi (Kenya)
Undertake a doctoral degree in fish nutrition including field visits in Kenya; Department of Biochemistry, University of Antwerp, Antwerp, Belgium

Oloo, Simon Y. (Kenya)
Undertake a doctoral degree in geotechnical engineering; Department of Civil Engineering, University of Saskatchewan, Saskatoon, SK, Canada

Saladaga, Florencia A. (the Philippines)
Undertake postdoctoral training on research for sweet potato; Asian Vegetable Research and Development Center, Taipei, Taiwan; Mie University, Mie, Japan; and International Potato Center, Lima, Peru

Syam, Amiruddin (Indonesia)
Undertake a master's degree in sociology; Faculty of Graduate

Studies, Hasanuddin University, Ujung Pandang, Indonesia

Sylla, Mamadouba K. (Guinea)
Undertake an internship to strengthen capacities in geotechnics; Département de géologie, École nationale d'ingénieurs de Sfax, Sfax, Tunisia

Tan Zhen-xin (China)
Undertake a master's degree in education in curriculum studies; University of Victoria, Victoria, BC, Canada

Thangavelu, S. (India)
Undertake a training program in agriculture; Texas Agricultural Experiment Station, Lubbock, TX, USA

Vaz, Paula, M.S. (Mozambique)
Support travel to Ismailia, Egypt to attend a course on the "Identification of research priorities and development of proposals"; Department of Epidemiology, Suez Canal University, Cairo, Egypt

Villar, Edwin C. (the Philippines)
Undertake graduate studies leading to a doctorate in animal science; Department of Animal Science, University of the Philippines, Los Baños, the Philippines

Institutional development award

Benarika, Abderrahmane (Algeria)
Start a doctoral degree program in international business; Laval University, Ste-Foy, PQ, Canada

National Coordination and Planning Centre (Morocco)
Enable eight students to attend theory and practical advanced courses on modeling and numerical simulation of water resources in Marrakech [Boukari, Moussa (Bénin); Biemi, Jean (Côte d'Ivoire); Derman, Assouma (Togo); Ly, Saidou (Mali); Quist, C. (Ghana); Sambou, S. (Senegal); Abowei, F.N. (Nigeria); Lafe, O. (Nigeria); Sarr, Amadou (Senegal)]; National Coordination and Planning Centre, Rabat, Morocco

Consejo Superior Universitario Centroamericano (Costa Rica)
Allow seven students to undertake a master's degree in sociology [Alas, Mario (Honduras); Castro, Carlos

(Costa Rica); Andrade, Maria de Jesus (Honduras); Icabalzeta, Carolina (Nicaragua); Lara, Silvia (Costa Rica); Ramos, Carlos (El Salvador); Roman, Isabel (Costa Rica)]; Maestria Centroamericana en Sociología, Universidad de Costa Rica, San José, Costa Rica

Dey, Anton (Guyana)
Undertake studies toward a master's degree in soil science; Department of Agriculture, University of Guelph, Guelph, ON, Canada

Kigutha, Hilda (Kenya)
Support participation in the training course on public health nutritional epidemiology; University of Southampton, Southampton, Hants, UK

Levira, Modest Athmani (United Republic of Tanzania)
Undertake a master's degree in educational media and technology; Department of Education, Concordia University, Montreal, PQ, Canada

Mugore, Joseph (Zimbabwe)
Support fieldwork in Zimbabwe for doctoral studies in development planning; Department of Sociology, McGill University, Montreal, PQ, Canada

Ngau, Margaret M. (Kenya)
Undertake thesis writing on school dropouts in Kenya to strengthen the Department of Education and Administration particularly relating to school administration and planning; International Studies and Overseas Programs, University of California, Los Angeles, CA, USA

Nzioka, Charles B.K. (Kenya)
Undertake a master's of philosophy degree in community health; Department of Sociology, University of London, London, UK

Omwega, M.J. (Kenya)
Undertake studies in epidemiology and biostatistics; Department of Epidemiology, McGill University, Montreal, PQ, Canada

Sakiliba, Hélène (Senegal)
Start a doctoral degree program in nutrition education; Nutrition humaine et consommation, Laval University, Ste-Foy, PQ, Canada

Salanje, Geoffrey Francis (Malawi)
Undertake a master's degree in

library sciences; University College of Wales, Aberystwyth, Cardigan, UK

World Association of Industrial and Technological Research Organizations (the Netherlands)
Provide support for four trainees [Nyarko, S.O. (Ghana); Nyambe, L.A. (Zambia); Imende, P.B. (Kenya); Nyonyi, W. (Tanzania)] for a course in information and extension services; Caribbean Industrial Research Institute, St Augustine, Trinidad and Tobago

Pearson fellowship

Pearson fellows undertake a program of academic study focusing on public administration and management at the Faculty of Administration of the University of Ottawa, ON, Canada, with practical attachment with a government department.

Aamir, Suhail (Pakistan) *Present position in home country:* Deputy commissioner (General)

Acharya, Ram C. (Nepal) *Present position in home country:* Section Officer, Foreign Aid Coordination Division, Ministry of Finance

Camargo, Heloisa (Brazil) *Present position in home country:* Advisor in Agricultural Matters to the Senate

Kalimba, Sophie M. (Malawi) *Present position in home country:* Town Planning Officer, City Engineer, Blantyre

Mahama, Alimatu (Ghana) *Present position in home country:* Women in Development Coordinator, Northern Region Rural Integrated Program

Malvicino, Guillermo A. (Argentina) *Present position in home country:* Controller for the Board of Directors, Corporación del Mercado Central de Buenos Aires

Motsa, Christabel J.S.Z. (Swaziland) *Present position in home country:* Principal Home Economics Officer, Ministry of Agriculture

Ortile, Mary Antoniette (the Philippines) *Present position in home country:* Senior Presidential Staff Officer, Cabinet Secretariat, Office of the President

Parasuram, Ramalingam (India)
Present position in home country:
 Deputy Secretary, Ministry of Textiles

Ramachandran, Arijirajalo
 (Malaysia) *Present position in home country:* Program Coordinator,
 National Institute of Public
 Administration, Public Services
 Department

Rana, Abdul Waheed (Pakistan)
Present position in home country:
 Assistant Chief, Planning and
 Development Division

Centre internship

The internship program provides training opportunities to candidates from institutions or projects to which IDRC has an expressed commitment. Candidates are expected to acquire knowledge and skills available within the Centre that relate to their fields of interest. In addition, they will share with Centre staff their knowledge and understanding of their research environment and the cultural traits of their place of origin by participating in the ongoing work of the division or regional office where they are stationed.

Ceban-Bittle, Maritza (Canada)
 Learn about the research and evaluation design, data analysis, and survey administration in the Fellowships and Awards Division; Fellowships and Awards Division, IDRC, Ottawa, ON, Canada

Masse, Denis (Canada)
 Acquire knowledge and skills available within the context of the Centre and to contribute his knowledge and understanding of the research environment; Social Sciences Division, IDRC, Ottawa, ON, Canada

Sudarshan, Ratna M. (India)
 Contribute to the Centre's understanding of the research environment through on-going work at the South Asia Regional Office; South Asia Regional Office, IDRC, New Delhi, India

Awards given to Canadian researchers

IDRC involves the Canadian academic community in addressing the problems of international development through the young Canadian researchers award giving Canadian graduate students or junior professionals a chance to take research or research-related training in developing countries. The award covers a 12-month period.

Young Canadian researchers' award

Allum, Claire (Canada, University of Calgary)
 Undertake research on Chachi land use in northwestern Ecuador: with reference to past and present solutions to the nondestructive use of tropical rain forest leading to a doctoral degree in archaeology; Centre for Anthropological and Archaeological Research, Escuela Superior Politécnica del Litoral, Guayaquil, Ecuador

Bell, Kim (Canada, Memorial University of Newfoundland)
 Undertake 2nd year of research on life-cycle analysis for enhancement and management of anadromous goby fisheries; Fisheries Development Division, Ministry of Agriculture, Roseau, Dominica

Blain, Dominique (Canada, University of Toronto)
 Undertake research on the *Fallow forest utilization* project in partial fulfillment of the requirements for a doctoral degree in forestry; Instituto Nacional de Investigación Agraria y Agroindustrial, Lima, Peru

Bolan, Kim (Canada, *Vancouver Sun*)
 Undertake project of creating a Central American-Canadian News Service; Centro Exterior de Reportes Informativos sobre Guatemala, México DF, Mexico; Agencia Salvadoreña de Prensa, San Salvador, El Salvador

Booth, Sarah (Canada, McGill University)
 Undertake 2nd year of research on indigenous green plants used as food and medicine by the Kekchi people in Guatemala; Center for the Studies of

Sensory Impairment, Aging and Metabolism of the Instituto de Nutrición de Centro América y Panamá, Guatemala, Guatemala

Boyle, John (Canada, University of Toronto)
 Undertake research on international assistance and the implementation of environmental assessment by developing countries in partial fulfillment of the requirements for a doctoral degree in environmental geography; University of Indonesia, Jakarta, Indonesia; Asian Institute of Technology, Bangkok, Thailand

Canadian Society of International Health (Canada)
 Enable five graduate students in the health field to undertake master's or doctoral degree programs [Cook, Philip; Krause, Vivian; Mohamed, Nashila; and two others]; Canadian Society of International Health, Ottawa, ON, Canada

Cloutier, Luce (Canada, Laval University)
 Undertake research on "Health Strategies for Urban Chadian Women"; Centre d'étude et de formation pour le développement, N'Djamena, Chad

Gordon, Catriona (Canada, University of Toronto)
 Undertake research on the effects of air pollution from Caracas and other urban centres on the tropical cloud forests of two national parks in Venezuela; Centro de Ecología, Instituto Venezolano de Investigaciones Científicas, Caracas, Venezuela

Greenberg, Charles (Canada, University of British Columbia)
 Undertake research on the transformation of the rural landscape: impact of megaeconomic growth in the Bangkok metropolitan region in partial fulfillment of the requirements for a doctoral degree in geography; Asian Institute of Technology, Bangkok, Thailand; and Human Resource Development Institute, Thammasat University, Bangkok, Thailand

Hambly, Helen (Canada, York University)
 Undertake research on agroforestry and land- and tree-tenure rights of rural women for a case study of two

communities in Kenya for a master's degree in environmental studies; Department of Urban and Regional Planning, University of Nairobi, Nairobi, Kenya

Jacob, Jacqueline (Canada, University of British Columbia)
Undertake 2nd year of research in partial fulfillment of the requirements for a doctoral degree in animal science; Department of Animal Production, University of Nairobi, Nairobi, Kenya

Kambites, Sarah (Canada, McGill University)
Undertake research on the effectiveness of nongovernmental organizations (NGOs) in education assistance: a case study of Canadian NGOs in Kenya; Jomo Kenyatta University, Nairobi, Kenya

Keachie-Sullivan, Judith (Canada, Universidad Peruana Cayetano Heredia)
Undertake research on planning and administrative strategies for NGO maternal-child health programs in Peru in partial fulfillment of the requirements for a master's degree in health administration; Programa de Administración de Salud, Universidad Peruana Cayetano Heredia, Lima, Peru

Korban, Martine (Canada, McGill University)
Complete research on transformation of *Phaseolus vulgaris* using *Agrobacterium* vectors in partial fulfillment of the requirements for a doctoral degree in plant science; Centro Internacional de Agricultura Tropical, Cali, Colombia

Laliberté, Danièle (Canada, Montreal University)
Undertake research on the "Evolution

of family structure and of social and demographic strategies for displaced persons and refugees from Chad," in fulfillment of the requirements of a doctoral degree in demography; Centre d'études et de recherche sur la population pour le développement, Institut du Sahel, Bamako, Mali

MacDonald, Kenneth I. (Canada, University of Waterloo)
Undertake research on cultural analysis of risk: the impact of economic development upon risk and vulnerability to natural hazards; Aga Khan Rural Support Programme, Pakistan Agricultural Research Council, Gilgit, Pakistan

Mather, Charles Thomas (Canada, Queen's University)
Undertake research on land, labour and forced removal in apartheid South Africa in partial fulfillment of the requirements for a doctoral degree in geography; University of Witwatersrand, Johannesburg, South Africa

Murchie, Kevin B. (Canada, York University)
Undertake research on Canadian and Caribbean nongovernmental organizations cooperating for rural development; Barbados Agricultural Society, Bridgetown, Barbados; Caribbean People's Development Agency, Kingston, Jamaica; Association of Development Agencies, Castries, Saint Lucia

Neitzert, Monica C. (Canada, University of Toronto)
Undertake research on a microeconomic analysis of the urban labour market in Kenya in partial fulfillment of the requirements for a doctoral degree in economics; Department of Economics, University of Nairobi, Nairobi, Kenya

Rizk, Nagla (Canada, McMaster University)
Undertake a 2nd year of research on "Comparative Advantage, Economic Efficiency, and Research and Development: The Case of Egypt — A Sectoral Perspective" in partial fulfillment of the requirements for a doctoral degree in economics; The American University in Cairo, Cairo, Egypt

Saleh, Walid (Canada, Concordia University)
Undertake a 2nd year of research toward a doctoral degree; Soil and Irrigation Department, University of Jordan, Amman, Jordan

Salinas, Bertha (Canada, University of Montreal)
Undertake a 2nd year of research toward a doctoral degree in instructional technology; Centro de Estudios Educativos, México DF, Mexico

Schmidt, Rodney (Canada, University of Toronto)
Undertake research on capital flight from developing countries in Latin America: a general equilibrium approach in partial fulfillment of the requirements for a doctoral degree in economics; Alternativas de Desarrollo, San José, Costa Rica; Instituto Centro Americano de Administración Empresas, Alajuela, Costa Rica

Gemini award

Thompson, Allan (Canada)
Undertake internship with assignments and research in the Maghreb; Gemini News Service, London, UK

Publications

Just as the program activities of the Communications Division are concerned with the dissemination of research results in the Third World, its support function within the Centre is to publish a wide range of scientific and technical publications. In 1990–1991, the Division published 52 books, covering most of the research areas supported by IDRC's other program divisions.

The Division also operates an information program for the Centre to inform special audiences in Canada and abroad about the role of research in development. One of the key components of this program is *The IDRC Reports / Le CRDI Explore / El CIID Informa*, a quarterly magazine published in three separate language editions. It reports on the work of the Centre and provides a forum for discussion of vital development issues.

IDRC publications / Publications du CRDI

IDRC Annual Report 1989–1990 / Rapport annuel CRDI 1989–1990. IDRC-003/90e,f, 94 + 82 p.

Estudios de mercado para productos alimenticios y procesamiento de alimentos en los países en desarrollo: trabajos presentados en un seminario celebrado en Singapur del 1 al 4 de abril de 1986. Young, R.H., MacCormac, C.W., ed. IDRC-249s, xii + 170 p.

Repercusiones de la modernización sobre el desarrollo y el comportamiento demográfico: estudios de casos en siete países del Tercer Mundo. Vlassof, C., Barkat-e-Khuda, ed. IDRC-260s, xi + 144 p.

Les décortiqueurs à disques abrasifs en Afrique : de la recherche à la diffusion. Bassey, M.W., Schmidt, O.G. IDRC-270f, x + 160 p.

La culture en couloirs dans les tropiques humides et subhumides : compte rendu d'un atelier international tenu à Ibadan, Nigéria, du 10 au 14 mars 1986. Kang, B.T.,

Reynolds, L., réd. IDRC-271f, x + 271 p.

Evaluación rápida de problemas nutricionales de la comunidad: estudio de caso de Parbhani, India. Kashyap, P., Young, R.H. IDRC-274s, ix + 66 p.

Shrubs and tree fodders for farm animals: proceedings of workshop in Denpasar, Indonesia, 24–29 July 1989. Devendra, C., ed. IDRC-276e, xii + 349 p.

Addressing the human dimension in nutrition sciences, agroindustries, and international agricultural research. Young, R.H. IDRC-285e, viii + 48 p.

La technologie, le rôle des sexes et le pouvoir en Afrique. Stamp, P. IDRC-TS63f, x + 213 p.

Solar-powered desalination: a case study from Botswana. Yates, R., Woto, T., Tlhage, J.T. IDRC-TS65e, viii + 55 p.

Water disinfection by solar radiation: assessment and application. Acra, A., Jurdi, M., Mu'Allem, H., Karahagopian, Y., Raffoul, Z. IDRC-TS66e, xi + 75 p.

Manual for preparing records in microcomputer-based bibliographic information systems. Di Lauro, A., Brandon, E. IDRC-TS67e, x + 355 p.

La variable del género en la investigación agrícola. Feldstein, H.S., Flora, C.B., Poats, S. IDRC-MR225s, vi + 56 p.

La vieillesse de la population en Afrique. Kouamé, A. IDRC-MR229f, vi + 46 p.

Las redes latinoamericanas de información: observaciones sobre su desarrollo, manejo y utilización. Akhtar, S., ed. IDRC-MR232s, xiv + 165 p.

Converging disciplines: management of recorded information in developing countries. Cooke, A., ed. IDRC-MR234e, xii + 60 p.

Disciplines convergentes : la gestion de l'information consignée dans les pays en voie de développement.

Cooke, A., réd. IDRC-MR234f, xii + 64 p.

Small ruminants research and development in the Near East: proceedings of a workshop held in Cairo, Egypt, 2–4 November 1988. Aboul-Naga, A.M., ed. IDRC-MR237e, iv + 223 p.

La información, un recurso para compartir: veinte años de experiencia del CIID. Akhtar, S., ed. IDRC-MR240s, viii + 132 p.

Performance review of institutions for technology policy in Ghana, Nigeria, and Tanzania. Goka, A.M., Paschal, B.M., Osunbor, O.A. IDRC-MR241e, viii + 314 p.

Technology policy studies in eastern and southern Africa. IDRC-MR242e, x + 393 p.

Rural development in eastern and southern Africa: selected case studies. Kabagambe, J.C., Odada, J.E.O., Jambiya, G.L.K., Wanjohi, N.G. IDRC-MR243e, viii + 383 p.

Participation and development in eastern and southern Africa. Butegwa, F., Mulwanda, M.P., Rutabanzibwa-Ngaiza, J. IDRC-MR244e, 330 p.

Preschool education in the West Bank: a qualitative survey. Arafat, C. IDRC-MR249e, vi + 65 p.

Oil crops: proceedings of the three meetings held at Pantnagar and Hyderabad, India, 4–17 January 1989. Omran, A., ed. IDRC-MR252e, xii + 332 p.

Project profiles 2: education, work, and employment. IDRC-MR253e, 71 p.

Patterns of domestic air pollution in rural India. Ramakrishna, J. IDRC-MR254e, x + 137 p.

Educación general, educación especializada y ocupación en Colombia. Bernal, M.E., Molina, C.G. IDRC-MR255s, vi + 53 p.

Development research donors in sub-Saharan Africa: a review of selected agencies. Asibey, A.O. IDRC-MR256e, vi + 50 p.

Energy: research, development, and extension projects in Tanzania. Mwandosya, M.J., Luhanga, M.L. IDRC-MR257e, ii + 107 p.

Small ruminant production systems network for Asia: proceedings of the inaugural meeting and launching of the Asian Small Ruminant Information Centre, Kuala Lumpur, Malaysia, 21–23 August 1989. Devendra, C., ed. IDRC-MR258e, vi + 166 p.

Managing international technology transfer: a strategic approach for developing countries. Hoffman, K., Girvan, N. IDRC-MR259e, x + 312 p.

Une stratégie du développement des ressources humaines : communications découlant du séminaire-atelier tenu à Yaoundé, Cameroun, du 2 au 5 février 1988. IDRC-MR260f, 506 p.

Household energy surveys in Third World cities: some methodological issues. Tyler, S. IDRC-MR262e, 34 p.

Zoonotic and parasitic diseases: proceedings of the third international and pan-Arab seminar held in Amman, Jordan, 17–20 October 1989. Oumeish, O.Y., Wijeyaratne, ed. IDRC-MR263e, vi + 205 p.

Community nutrition research: making it rapid, responsive, and relevant. Cervinkas, J., Young, R.H., ed. IDRC-MR264e, iv + 29 p.

Seminar on external support to developmental research: the case of sub-Saharan Africa. IDRC-MR265e, vi + 27 p.

Séminaire sur l'aide extérieure à la recherche au service du développement : le cas de l'Afrique subsaharienne. IDRC-MR265f, vi + 33 p.

Research on trade policy in developing countries: a survey and assessment of future priorities. Weston, A., Young, R. IDRC-MR267e, iv + 52 p.

Recherche sur la politique commerciale dans les pays en développement — Priorités futures : enquête et évaluation. Weston, A., Young, R. IDRC-MR267f, iv + 63 p.

Bibliografía sobre educación indígena-campesina en América

Latina. Sanchez-Parga, J. IDRC-MR268s, vi + 77 p.

Human sexuality: research perspectives in a world facing AIDS. Chouinard, A., Albert, J., ed. IDRC-MR269e, vi + 210 p.

Educational change in Indonesia: a case study of three innovations. Shaeffer, S. IDRC-MR270e, vi + 112 p.

Oil crops: sesame and sunflower subnetworks — Proceedings of the joint second workshop held in Cairo, Egypt, 9–12 September 1989. Omran, A., ed. IDRC-MR271e, x + 222 p.

Traditional medicine in Zaire: present and potential contribution to the health services. IDRC-MR272e, 40 p.

Fecundidad en América Latina: los casos de Lima, Rio de Janeiro, y Asunción. Aramburu, C.E., Enoch, E.M.L., Shoemaker, J.F. IDRC-MR275s, vi + 61 p.

Changes in eastern Europe: implications for developing countries. Griffith-Jones, S. IDRC-MR276e, ii + 41 p.

La sécheresse en Afrique : compte rendu d'un séminaire tenu à Tombouctou, Mali, du 24 au 28 novembre 1986 / Drought in Africa: proceedings of a workshop held in Timbuktu, Mali, 24–28 November 1986. IDRC-MR277e,f, vi + 213 p.

Empowering through communication: women's experiences with participatory communication in development processes. Alcalá, P.R. IDRC-MR278e, 55 p.

Developing countries and the new biotechnology: market entry and industrial policy. Sercovich, F.C., Leopold, M. IDRC-MR279e, iv + 109 p.

MINISIS Users' Group Meeting 1989. IDRC-MR281e, viii + 367 p.

Dissemination of research results: a case study of written documents based on the producer's perception of the user's needs in south-east Asia. Hénault, G. IDRC-MR282e, iv + 35 p.

Publications and texts by Centre staff / Publications et textes rédigés par les cadres du Centre

IDRC staff are frequently called upon to participate in workshops and seminars, to speak at conferences, and to contribute to scientific journals. In addition, many of the research projects supported by IDRC generate their own publications — reports, texts, and newsletters — that, although not produced or distributed by the Centre, form an important part of the effort to disseminate research results as widely as possible.

The following sections list as many of these documents as were available at the time of publication of this report. Anyone interested in obtaining copies of these documents should contact the normal sources (authors, institutions, libraries, or bookstores), although IDRC will try to supply copies of items not available elsewhere. In case of short supply, preference will be given to researchers in developing countries.

Akhtar, S. 1990. Information strategy for Africa. *Development* (Rome), 2, 91–96.

Alvarez H., B., Gómez B., H. 1990. Building research institutions in developing countries: a research perspective. Regional Office for Latin America and the Caribbean, IDRC, Montevideo, Uruguay. 13 p.

Bassey, M.W., Oosthuizen, P.H. 1990. Evaluation of the use of chimney heating with an indirect natural convection solar dryer. *In* Simulation and numerical methods in heat transfer, American Society of Mechanical Engineers, Winter Annual Meeting, Dallas, Texas, 25–30 November 1990. ASME, New York, NY, USA.

Broadbent, K.P. 1989. Importance of information sharing in developing countries: marine science as an example. *In* Marine science information throughout the world: sharing the resources. Paper presented at the 14th International Conference of the Association of

Marine Science Libraries and Information Centers, Miami, Florida, 3–7 October 1988. IAMSILIC, Port Aransas, TX, USA. Pp. 3–6.

_____. 1990. Challenges for development in the Asia Pacific region: the information sector, Korea and the Philippines. Paper presented at the 53rd Annual Meeting, American Society for Information Science, Toronto, Ontario, 4–8 November. 1990. IDRC, Ottawa, ON, Canada. 20 p.

Broadbent, K.P., Lafond, R. 1990. Future of scientific, technical and industrial information to Third World users: a donor's view; the experience of the International Development Research Centre (IDRC), Canada. Paper presented at the Colloque international sur l'avenir des services de documentation scientifique, technologique et industrielle, Leningrad, 28–31 mai 1990. IDRC, Ottawa, ON, Canada. 14 p.

Brooks, D.B. 1990. Israel and the environment: signs of progress. *Reconstructionist* (Wyncote, PA), 55 (4), 17–19.

_____. 1990. Redefining development. Canadian Broadcasting Corporation, Toronto, ON, Canada. 38 p.

Brooks, D.B., Paehlke, R. 1991. Environmental issues and democratic socialism in Canada or seeing green through pink tinted glasses. *In* *Debating Canada's future: views from the left*. James Lorimer, Toronto, ON, Canada. Pp. 127–146.

Camara, A.B., Cliche, G., Valantin, R. 1989. Approche du CRDI dans la lutte contre la désertification en Afrique et l'apport de son programme en cartographie et télédétection. Communication présentée aux Deuxièmes journées scientifiques du réseau thématique de l'Université des réseaux d'expression française : télédétection, 21–24 novembre 1989. CRDI, Ottawa, ON, Canada. 13 pp.

Campbell, M. 1990. IDRIS data base. *Food Laboratory News* (Uppsala), 20 (6:2), 20–23.

Charbonneau, R. 1990. Declaring biological war. *Agricultural Information Development Bulletin* (Bangkok), 12 (3, Sep.), 33–34.

Chataway, B. 1990. IDRC library: a special resource. *In* *Proceedings of the 23rd annual conference of the Association for Population / Family Planning Libraries and Information Centers*, Toronto, Ontario, 30 April–3 May 1990. APLIC International, New York, NY, USA. Pp. 34–40.

Cliche, G., Bonn, F.J., Merzouk, A. 1990. International cooperation in remote sensing: how can a project become a success? Paper presented at the 23rd International Symposium on Remote Sensing of the Environment, Bangkok, 17–26 April 1990. IDRC, Ottawa, ON, Canada. 5 pp.

Davy, F.B. 1989. Aquaculture in Japan. *In* *Current status of fish nutrition in aquaculture: the 3rd International Symposium on Feeding and Nutrition in Fish*, Toba, 28 August–1 September 1989. Tokyo University of Fisheries, Tokyo, Japan. Pp. 115–129.

_____. 1989. Asian fisheries directory. Asian Fisheries Society, Manila, Philippines. 127 pp.

_____. 1990. Mariculture in Japan: 1, Development of an industry. *World Aquaculture* (Baton Rouge, LA), 21 (4), 36–47.

Devendra, C. 1989. Small ruminant production in the Asian region. Paper presented at the National Meeting on Small Ruminants, Beijing, 16–20 October 1989. IDRC, Singapore. 22 pp.

_____. 1990. Feed resource development from agro-industrial by-products and their efficient utilisation in South East Asia and the Pacific. Paper presented at the Regional Seminar on Management and Utilisation of Agricultural and Industrial Wastes, Kuala Lumpur, 21–23 March 1990. IDRC, Singapore. 26 pp.

_____. 1990. Goat production: an international perspective. Paper presented at the International Symposium on Goat Production, Florida, 22–25 October 1990. IDRC, Singapore. 36 pp.

_____. 1990. Prerequisites to the development of feeding systems for small farms in Asia. Paper presented at the Seminar on Farm Level Animal Feeding Systems, 24 July–3 Aug.

1990. Regional Office for Southeast and East Asia, IDRC, Singapore. 36 pp.

Devendra, C., Imaizumi, E. 1989. Ruminant physiology and nutrition in Asia. Paper presented at the Satellite Symposium, Sendai, 28 August 1989. *In* *Proceedings of the Satellite Symposium held during the 7th International Symposium on Ruminant Physiology*, Sendai, Japan, 28 August 1989. Japan Society of Zootechnical Science, Tokyo, Japan. 100 pp.

English, P., Sedigh, S. 1990. Annotated bibliography of small scale industry projects funded by IDRC. IDRC, Ottawa, ON, Canada. 58 pp.

Escobar, G., Berdegú, J. 1990. Tipificación de sistemas de producción agrícola. *Red Internacional de Investigación de Sistemas de Producción*, Santiago, Chile. 283 pp.

Forget, G. 1991. Pesticides and the Third World. *Journal of Toxicology and Environmental Health* (Bristol, PA), 32, 11–31.

Glover, D.J. 1990. Layman's guide to structural adjustment. IDRC, Ottawa, ON, Canada. 14 pp.

Glover, D.J., Kusterer, K. 1989. Small farmers, big business: contract farming and rural development. Macmillan, London, UK. 168 pp.

Head, I.L. 1989. Closing remarks to the 5th International Conference on AIDS, Montreal, 9 June 1989. IDRC, Ottawa, ON, Canada. 1989. 7 pp.

_____. 1990. What kind of world do we live in? Paper presented at Course 64, National Defence College, Kingston, Ontario, August 1990. IDRC, Ottawa, ON, Canada. 15 pp.

_____. 1990. Canada reaps goodwill: research centre works as partner in development. *Ottawa Citizen*, 22 October, p. A10.

_____. 1990. Notes for an address to the Nigerian Institute of International Affairs, Lagos, Nigeria, 5 June 1990. IDRC, Ottawa, ON, Canada. 1990. 10 pp.

_____. 1990. Notes for remarks on the occasion of receiving an

honourary degree at St Francis Xavier University, 1 December 1990. IDRC, Ottawa, ON, Canada. 4 pp.

_____. 1990. Notes for remarks on the occasion of receiving an honorary Doctor of Forestry degree at the Beijing Forestry University, Beijing, People's Republic of China, 15 November 1990. IDRC, Ottawa, ON, Canada. 3 pp.

_____. 1990. Notes for remarks to the International Symposium on Development Cooperation, Tokyo, Japan, 5 October 1990. IDRC, Ottawa, ON, Canada. 5 pp.

Kategile, J.A., Dzwowela, B.H., Said, A.N., Wendem-Agenehu, A., ed. 1990. Utilization of research results on forage and agricultural by-product materials as animal feed resources in Africa: proceedings of the first Pasture Network for Eastern and Southern Africa/African Research Network for Agricultural Byproducts joint workshop held in Lilongwe, Malawi, 5–9 December 1988. International Livestock Centre for Africa, Addis Ababa, Ethiopia. 833 pp.

Kobkun Rayanakorn. 1990. Women and the law in Thailand and Canada. York University, Toronto, ON, Canada. 65 pp.

Loevinsohn, M. 1990. Feeding farmer innovation. ILEIA newsletter (Leusden), 6 (1), 14–15.

MacKay, K.T., Palomar, M.K., Sanico, R.T., ed. 1989. Sweet potato research and development for small farmers. Paper presented at the International Sweet Potato Symposium, Baybay, 20–26 May 1987. SEARCA, College, Laguna, Philippines. 391 pp.

Manji, F., Mwaniki, D.L., Simwa, J.M. 1990. Fluoride binding capacity of bone charcoal and its effects on selected micro-organisms. East African Medical Journal (Nairobi), 67 (6), 427–431.

Manji, F., Baelum, V., Fejerskov, O. 1990. New approach to investigating associations in periodontal disease data. Community Dentistry and Oral Epidemiology (Copenhagen), 18, 177–183.

Manji, F., Nagelkerke, N. 1990. What can variations in disease outcome tell us about risk? Community Dentistry and Oral Epidemiology (Copenhagen), 18 (2), 106–107.

Manji, F., Nagelkerke, N.J.D., Plummer, F.A., Holton, D., Anzala, A.O. 1990. Transition dynamics of HIV disease in a cohort of African prostitutes: a Markov model approach. AIDS (Philadelphia, PA), 4 (8), 743–747.

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Publications

Les activités de programme de la Division des communications visent à la diffusion des résultats de recherche dans le Tiers-Monde. Les activités de support à l'intérieur du Centre commandent la publication d'une vaste gamme d'ouvrages scientifiques et techniques.

En 1990-1991, la Division a publié 52 ouvrages portant sur les nombreux domaines de recherche subventionnés par les divisions de programme du CRDI. La Division assure aussi un service d'information pour le Centre. Ce service vise à expliquer à certains publics, tant au pays qu'à l'étranger, le rôle de la recherche dans le développement. Un des éléments clés de ce service est la revue *The IDRC Reports/Le CRDI Explore/El CIID Informa* qui paraît tous les trimestres en trois langues. Elle fait connaître à ses lecteurs les travaux du Centre et fournit une tribune où sont discutées des questions vitales pour le développement.

Publications du CRDI

Le lecteur trouvera à la page 34 de la section anglaise de cette annexe une liste des publications produites par le CRDI ou résultant directement de recherches subventionnées par ce dernier. Les titres des ouvrages sont donnés dans la langue de publication. Les catalogues des publications sont fournis sur demande.

Publications et textes rédigés par les cadres du Centre

Le personnel du CRDI est souvent sollicité pour participer à des ateliers et séminaires, pour prendre la parole à des conférences et pour collaborer à des revues scientifiques. De plus, un grand nombre de projets de recherche subventionnés par le Centre débouchent sur la publication de documents, rapports ou bulletins d'information qui, bien que non publiés et distribués par le Centre, constituent une part importante des

Publications/recherche appuyée par le CRDI

Efforts déployés pour diffuser aussi largement que possible les résultats obtenus par les chercheurs. Le lecteur trouvera à la page 35 de la section anglaise de cette annexe la liste de toutes les publications parues au moment de la rédaction du présent rapport. Toute personne désireuse de se procurer des exemplaires de ces documents est priée de s'adresser à la source (auteurs, institutions, bibliothèques, librairies); le Centre s'efforcera cependant de fournir ces documents lorsqu'ils ne seront pas disponibles ailleurs. Les documents en voie d'épuisement seront adressés de préférence aux chercheurs des pays en développement.

Le lecteur trouvera également à la page 38 de la section anglaise de cette annexe une liste des publications et recherches subventionnées par le CRDI ainsi que d'autres publications et textes.

- Département d'économique, Université de Nairobi, Kenya
- Rizk, Nagla** (Canada, Université McMaster)
- Deuxième année d'une recherche intitulée «Comparative Advantage, Economic Efficiency, and Research and Development: The Case of Egypt — A Sectoral Perspective», dans le cadre d'un programme de doctorat en économique; Université américaine, Le Caire, Egypte
- Saleh, Walid** (Canada, Université de Montréal)
- Deuxième année de recherche en vue d'un doctorat; Département des sols et de l'irrigation, Université de Jordanie, Amman, Jordanie
- Sallinas, Bertha** (Canada, Université de Montréal)
- Entreprendre une deuxième année de recherche en vue d'un doctorat en technologie éducative; Centro de Estudios Educativos, México, Mexique
- Schmidt, Rodney** (Canada, Université de Toronto)
- Recherche sur la fuite des capitaux des pays en développement d'Amérique latine : une démarche fondée sur l'équilibre général, dans le cadre des exigences d'un programme de doctorat en économique; Alternativas de Desarrollo, San José, Costa Rica; Instituto Costarricense de Empresas, Alajuela, Costa Rica
- Bourse Gemini**
- Thompson, Allan** (Canada)
- Stage avec affections et travaux de recherche au Maghreb; Agence de presse Gemini, Londres, R-U
- socio-démographiques des personnes déplacées et réfugiées du Tchad» en vue d'obtenir un doctorat en démographie; Centre d'études et de recherche sur la population pour le développement, Institut du Sahel, Bamako, Mali
- McDonald, Kenneth I.** (Canada, Université de Waterloo)
- Recherche sur l'analyse du risque culturel : répercussions du développement économique sur le risque et vulnérabilité aux risques naturels; Programme de soutien rural Aga Khan, Conseil pakistanais de recherches agricoles, Gilgit, Pakistan
- Mather, Charles Thomas** (Canada, Université Queen's)
- Recherche sur les terres, la main-d'œuvre et les déplacements forcés dans l'Afrique du Sud en régime d'apartheid, dans le cadre des exigences d'un programme de doctorat en géographie; Université de Witwatersrand, Johannesburg, Afrique du Sud
- Murchie, Kevin B.** (Canada, Université York)
- Recherche sur les ONG canadiennes et antillaises oeuvrant de concert dans le domaine du développement agricole; Société d'agriculture de la Barbade, Bridgetown, Barbade; Agence de développement des populations antillaises, Kingston, Jamaïque; Association des organismes de développement, Castries, Sainte-Lucie
- Neitzert, Monica C.** (Canada, Université de Toronto)
- Recherche portant sur l'analyse micro-économique de la population active urbaine au Kenya, dans le cadre des exigences d'un programme de doctorat en économique;
- maîtrise en écologie; Département de planification urbaine et régionale, Université de Nairobi, Kenya
- Jacob, Jacqueline** (Canada, Université de Colombie-Britannique)
- Deuxième année d'une recherche entreprise dans le cadre d'un programme de doctorat en zootechnie; Département de production animale, Université de Nairobi, Kenya
- Kambites, Sarah** (Canada, Université McGill)
- Recherche sur l'efficacité de l'aide à l'éducation entreprise par les organisations non gouvernementales : une étude de cas des ONG canadiennes au Kenya; Université Jomo Kenyatta, Nairobi, Kenya
- Keachie-Sullivan, Judith** (Canada, Université Periana Cayetano Heredia)
- Recherche sur les stratégies de planification et gestion des programmes de santé des ONG pour la maternité et l'enfance au Pérou, dans le cadre d'un programme de maîtrise en gestion de la santé; Programme de gestion de la santé, Universidad Periana Cayetano Heredia, Lima, Pérou
- Korban, Martine** (Canada, Université McGill)
- Terminer la recherche entreprise sur la transformation de *Phaseolus vulgaris* par l'emploi d'agrobactéries, dans le cadre d'un programme de doctorat en phylogénie; Centre international d'agriculture tropicale, Cali, Colombie
- Laliberté, Daniele** (Canada, Université de Montréal)
- Entreprendre des recherches sur «L'évolution de la structure des ménages et des stratégies

Ramachandran, Arjijirajalo

(Malaisie)

Poste actuel dans le pays d'origine :

coordonnateur de programme, Institut

national d'administration publique, Département des services publics

Rana, Abdul Wahed (Pakistan)

Poste actuel dans le pays d'origine :

chef assistant, Division de la

planification et du développement

Bourses accordées

dans le cadre d'un

programme de stages

au Centre

Le programme de stages offre des

possibilités de formation au Centre

même dans leur domaine d'intérêt, à

des personnes provenant d'établisse-

ments ou de projets envers lesquels le

Centre s'est déjà engagé. En outre,

ces personnes partagent avec le

personnel du Centre leur connais-

sance de leur milieu de recherche et

de leur culture en participant au

travail de la division ou du bureau

régional où elles font leur stage.

Ceban-Bittie, Maritza (Canada)

Initiation à la conception de la

recherche et de l'évaluation, à

l'analyse des données et à

l'administration des enquêtes à la

Division des bourses; Division des

bourses, CRDI, Ottawa, ON, Canada

Masse, Denis (Canada)

Acquisition de connaissances et

la compréhension du contexte de la

recherche; Division des sciences

sociales, CRDI, Ottawa, ON, Canada

Sudarthan, Ratna M. (Inde)

Connaissance du contexte de la

recherche du Centre par un séjour au

Bureau régional pour l'Asie du Sud;

CRDI, New Delhi, Inde

Bourses accordées à des chercheurs canadiens

Le CRDI encourage les Canadiens à participer à la solution des problèmes de développement qui affectent les pays du Sud en accordant les bourses

Jeunes chercheurs canadiens qui

permettent chaque année à des

diplômés universitaires ou à des

jeunes professionnels de compléter

des travaux de recherche dans un

pays en développement pendant une

année.

Bourses accordées à des jeunes chercheurs canadiens

Allum, Claire (Canada, Université

de Calgary)

Recherche sur l'utilisation des sols en

pays Chachi (Nord-Ouest de

l'Équateur), en regard aux solutions

adoptées dans le passé et de nos jours

pour une exploitation non

destructrice de la forêt tropicale

humide, dans le cadre des études

conduisant au doctorat en

archéologie; Centre de recherches

anthropologiques et archéologiques,

Escuela Superior Politécnica del

Litoral, Guayaquil, Équateur

Bell, Kim (Canada, Université

Memorial à Terre-Neuve)

Deuxième année d'une recherche sur

l'analyse du cycle de vie pour le

soutien et la gestion des pêches du

goujon de mer anadrome; Division

du développement des pêches,

ministère de l'Agriculture, Roseau,

Dominique

Blain, Dominique (Canada, Université de Toronto)

Recherche sur le projet intitulé

«Utilisation des forêts en friche»

requis dans le cadre des études de

doctorat en foresterie; Institut

national de recherche agricole et

agro-industrielle, Lima, Pérou

Bolan, Kim (Canada, *Vancouver Sun*)

Projet de création d'une agence de

presse Canada-Amérique centrale;

Centre exécutif de rapports

d'information sur le Guatemala,

México, Mexique; Agence

salvadortienne de presse, San

Salvador, République du Salvador

Booth, Sara (Canada, Université

McGill)

Deuxième année d'une recherche sur

les plantes vertes indigènes par

comme aliments et médicamenteux

le peuple Kekchi au Guatemala;

Centre d'études sur les troubles

sensoriels, le vieillissement et le

métabolisme attaché à l'Institut de

nutrition d'Amérique centrale et de

Panamá, Guatemala, Guatemala

Boyle, John (Canada, Université de

Toronto)

Recherche sur l'aide internationale et

les évaluations d'impact environne-

mental réalisées par des pays en

développement, dans le cadre des

études de doctorat en écogéographie;

Université d'Indonésie, Djakarta,

Indonésie; Institut asiatique de

technologie, Bangkok, Thaïlande

Société canadienne pour la santé

internationale (Canada)

Permettre à cinq étudiants diplômés

dans le domaine de la santé

d'entreprendre des études de maîtrise

ou de doctorat (Cook, Philip; Krause,

Vivian; Mohamed, Nashila, et deux

autres boursiers); Société canadienne

pour la santé internationale, Ottawa,

ON, Canada

Cloutier, Luce (Canada, Université

Laval)

Entreprendre des recherches sur les

«Stratégies de santé chez les femmes

ichadiennes urbaines»; Centre

d'Étude et de formation pour le

Développement, N'Djamena, Tchad

Gordon, Catriona (Canada, Université de Toronto)

Recherche sur les effets de la

pollution atmosphérique de la ville de

Caracas et d'autres agglomérations

urbaines sur la forêt tropicale

montagneuses des deux parcs

nationaux du Venezuela; Centre

d'écologie, Institut vénézuélien de

recherche scientifique, Caracas,

Venezuela

Greenberg, Charles (Canada, Université de Colombie-Britannique)

Recherche sur la transformation du

croissance méga-économique dans la

région métropolitaine de Bangkok,

programme de doctorat en

géographie; Institut asiatique de

technologie, Bangkok, Thaïlande;

Institut de développement de

ressources humaines, Université

Thammasat, Bangkok, Thaïlande

Hambly, Helen (Canada, Université

York)

Recherche en agroforesterie et droits

fonciers des femmes rurales pour une

étude de cas de deux collectivités

kényennes, dans le cadre d'une

Thangavelu, S. (Inde)

Entreprenre un programme de formation en agriculture; Texas Agricultural Experiment Station, Lubbock, TX, E-U

Vaz, Paula M.S. (Mozambique) Voyage à Ismailia (Égypte) en vue de suivre un cours intitulé « Définition des priorités de recherche et élaboration de propositions »; Département d'épidémiologie, Université du Canal de Suez, Le Caire, Égypte

Villar, Edwin C. (Philippines) Etudes supérieures conduisant au doctorat en zootechnie; Département de zootechnie, Université des Philippines, Los Baños, Philippines

Bourses liées à un

établissement

d'enseignement

Benarik, Abderrahmane (Algérie) Entreprenre un doctorat en commerce international; Université Laval, Ste-Foy, QC, Canada

Centre National de Coordination et de Planification (Maroc) Suivre des cours avancés sur la modélisation et la simulation numérique en matière de ressources en eau et hydraulique à Marrakech [Boukari, Moussa (Béni); Biemi, Jean (Côte d'Ivoire); Derman, Assouma (Togo); Ly, Saïdou (Mali); Quidi, C. (Ghana); Sambou, S. (Sénégal); Abowei, F.N. (Nigéria); Laté, O. (Nigéria); Sarr, Amadou (Sénégal)]; Centre National de Coordination et de Planification, Rabat, Maroc

Consejo Superior Universitario Centroamericano (Costa Rica) Permettre à sept boursiers d'entreprenre des études conduisant à une maîtrise en sociologie [Alías, Mario (Honduras); Castro, Carlos (Costa Rica); Andrade, María de Jesús (Honduras); Icabalzeia, Carolina (Nicaragua); Lara, Silvia (Costa Rica); Ramos, Carlos (El Salvador); Roman, Isabel (Costa Rica)]; Maestria Centroamericana en Sociología, Université du Costa Rica, San José, Costa Rica

Dey, Anton (Guyana) Etudes en vue d'une maîtrise en

écologie; Département de

d'agriculture, Université de Guelph, Guelph, ON, Canada

Kigutha, Hilda (Kenya) Promouvoir la participation à un cours de formation épidémiologique en hygiène alimentaire publique; University of Southampton, Hants, R-U

Levira, Modest Athmani (Tanzanie) Etudes en vue d'une maîtrise en techniques et moyens modernes d'enseignement; Département des sciences de l'éducation, Université Concordia, Montréal, QC, Canada

Mugore, Joseph (Zimbabwe) Promouvoir une recherche sur le terrain au Zimbabwe dans le cadre d'études de doctorat en planification du développement; Département de sociologie, Université McGill, Montréal, QC, Canada

Ngau, Margaret M. (Kenya) Rédiger une thèse sur les abandons scolaires au Kenya afin de renforcer les compétences du Département des sciences de l'éducation et de l'administration, notamment en ce qui a trait à l'administration et à la planification scolaires; International Studies and Overseas Programs, University of California, Los Angeles, E-U

Nzioka, Charles B.K. (Kenya) Etudes en vue d'une maîtrise en philosophie, spécialisation santé communautaire; Département de sociologie, University of London, Londres, R-U

Omwega, M.J. (Kenya) Etudes en épidémiologie et biostatistique; Département d'épidémiologie, Université McGill, Montréal, QC, Canada

Sakiliba, Hélène (Sénégal) Entreprenre des études menant au doctorat en éducation nutritionnelle; Nutrition Humaine et Consommation, Université Laval, Québec, QC, Canada

Salanje, Geoffrey Francis (Malawi) Etudes en vue d'une maîtrise en biologie; University College of Wales, Aberystwyth, Cardigan, R-U

World Association of Industrial and Technological Research Organizations (Fay-Bas) Permettre à quatre boursiers [Nyariko, S.O. (Ghana); Nyamabe, L.A. (Zambie); Imende, P.B. (Kenya); Nyonyi, W. (Tanzanie)] de suivre un cours en services d'information et de diffusion à l'Institut antillais de recherches industrielles à St. Augustine, Trinité-et-Tobago.

Bourses Pearson

Les titulaires d'une bourse Pearson entreprennent un programme d'études en administration publique et en gestion à la Faculté d'administration de l'Université d'Ottawa (ON, Canada) et suivent un stage dans un ministère du gouvernement.

Aamir, Suhail (Pakistan) Poste actuel dans le pays d'origine : commissaire adjoint (général)

Acharya, Ram C. (Népal) Poste actuel dans le pays d'origine : agent de section, Division de coordination de l'aide étrangère, ministère des Finances

Camargo, Heloisa (Brésil) Poste actuel dans le pays d'origine : conseillère en matière d'agriculture auprès du Sénat

Kalimba, Sophie M. (Malawi) Poste actuel dans le pays d'origine : agent d'aménagement urbain, ingénieur civil, Blantyre

Mahama, Alimatu (Ghana) Poste actuel dans le pays d'origine : coordinatrice de Femmes en développement, Programme intégré rural de la région du Nord

Malvicino, Guillermo A. (Argentine) Poste actuel dans le pays d'origine : contrôleur pour le compte du conseil d'administration, Corporation del Mercado central de Buenos Aires

Moisa, Christabel J.S.Z. (Swaziland) Poste actuel dans le pays d'origine : agence principale en économie domestique, ministère de l'Agriculture

Ortle, Mary Antoinette (Philippines) Poste actuel dans le pays d'origine : présidentiel, Secrétariat du Conseil

Parasuram, Ramalingam (Inde) Poste actuel dans le pays d'origine : Sous-secrétaire, Ministère du textile

Koala, Peam (Papouasie-Nouvelle-Guinée)
Participation à un cours de formation régional sur les méthodes de formation; Asia and Pacific Training and Communication Program
Planning, Manille, Philippines
Lo, Henri Mathieu (Sénégal)
Entreprendre un stage en droit foncier et gestion des ressources naturelles; University of Wisconsin, Madison, WI, E-U
Miozi, Malongo R.S. (Tanzanie)
Etudes de doctorat en enseignement et développement agricoles; Département d'agriculture, Université de Colombie-Britannique, Vancouver, BC, Canada
Muingue, Humberto C. (Mozambique)
Voyage à Ismailia (Egypte) en vue de suivre un cours intitulé «Définition des priorités de recherche et élaboration de propositions»; Département d'épidémiologie, Université du Canal de Suez, Le Caire, Egypte
Okoth, Brigitte Kidi (Kenya)
Etudes de doctorat en génie écologique; Département de génie civil, Université de la Sakatchewan, Saskatoon, SK, Canada
Oloo, Simon Y. (Kenya)
Formation postdoctorale en recherche sur la patate douce; Centre asiatique de recherche et de développement de produits maraîchers, Taipei, Taiwan; Université de Mie, Mie, Japon et Centre international de la pomme de terre, Lima, Pérou
Syam, Amiruddin (Indonésie)
Etudes en vue d'une maîtrise en sociologie; Faculté d'études supérieures, Université Hasanuddin, Ujung Pandang, Indonésie
Sylla, Mamadouba K. (Guinée)
Entreprendre un stage afin d'accroître des capacités dans le domaine de la géotechnique; Département de Géologie, Ecole Nationale d'Ingénieurs de Sfax, Sfax, Tunisie
Tan, Zhen-xin (Chine)
Etudes en vue d'une maîtrise en sciences de l'éducation, spécialité : programmes d'études; Université de Victoria, Victoria, BC, Canada

des capacités dans le domaine de la géotechnique; Ecole Nationale d'Ingénieurs de Sfax, Sfax, Tunisie
El-Sharief, Moines H.A. Naser (Egypte)
Etudes en vue d'une maîtrise en systèmes d'information géographique; Département de génie cartographique, Université du Nouveau-Brunswick, Fredericton, NB, Canada
Essoh Tiapani, Nandjo L. (Côte d'Ivoire)
Entreprendre des études menant à la maîtrise en démographie; Université de Montréal, Montréal, QC, Canada
Gaye, Cheikh Becaye (Sénégal)
Permettre de finaliser sa thèse de doctorat d'Etat en géologie; Université de Paris-Sud, Orsay Cedex, Paris, France
Gikenye, M.W. (Kenya)
Fréquenter un cours sur l'information bibliographique en matière de développement; Department of Library Sciences, University of Sussex, Brighton, R-U
Goma, Isabelle (Congo)
Entreprendre un stage de perfectionnement dans le domaine de la nutrition; Université Cheikh Anta Diop, Dakar, Sénégal
Gustiano, Rudy (Indonésie)
Etudes en vue d'une maîtrise en sciences, spécialité : zoologie; Université de Singapour, Singapour
Houssenyatou, Barry (Guinée)
Entreprendre un stage en management des projets et entreprises; Ecole Supérieure de Gestion (CESAG), Dakar, Sénégal
Kallon, Michael (Sierra Leone)
Etudes en vue d'une maîtrise en sciences sociales (recherche en éducation); Département des sciences de l'éducation, Université Queen's, Kingston, ON, Canada
Kamasho, Josephat A. (Tanzanie)
Etudes de doctorat en développement agroécologique; Université de Guelph, Guelph, ON, Canada
Kaye, Mady Allafi Agnes (Bénin)
Entreprendre une maîtrise en socio-anthropologie; Université Nationale du Bénin, Cotonou, Bénin

Thong, Le Quang (Vietnam)
Etudes en vue d'une maîtrise en économie agricole; Université des Philippines, Los Baños, Philippines
Touré, Cheikhou Oumar (Sénégal)
Entreprendre des études probatoires menant à une maîtrise en sciences forestières; Département de sciences forestières, Université Laval, Ste-Foy, QC, Canada
Touré, Seydou Nourou (Sénégal)
Effectuer un stage au département d'économie agricole; Université de Manioba, Winnipeg, MB, Canada
Université Mahidol (Thaïlande)
Permettre à l'Institut de nutrition d'offrir deux cours de formation en nutrition communautaire à 13 participants (Pharmasena, M.D.; Hassan Kalinle, Faiza; Phitthanousone, C.H.; Souraxay, M.; Xue, Yimin; Zhou, Xiangli, et sept autres boursiers); Institut de nutrition, Université Mahidol, Nakhon, Thaïlande
Zagare, Guy M.L. (Sénégal)
Entreprendre des études de cycle supérieur menant au doctorat d'Etat; Ecole Inter-Etats des Sciences et Médecine Vétérinaire, Dakar, Sénégal
Bourses accordées dans le cadre de projets
Azagoh Kouadio, Marie-Christine (Côte d'Ivoire); Entreprendre des études de cycle supérieur menant au doctorat; Faculté des lettres et sciences humaines, Université de Sherbrooke, Sherbrooke, QC, Canada
Bayogan, Emma Ruth (Philippines)
Etudes conduisant au doctorat en horticulture; Université des Philippines, Los Baños, Philippines
Campilan, Dindo M. (Philippines)
Suivre un cours intitulé «Groupe et réorganisation de l'information»; Bibliothèque et Centre de documentation régional, Institut asiatique de technologie, Bangkok, Thaïlande
Data, Emma (Philippines)
Formation et recherche postdoctorale en technologie après la récolte; Horticulture Department, University of Georgia, Athens, GA, E-U
Dia, Mohamed (Guinée)
Entreprendre un stage afin d'accroître

Bourses

Bourses accordées à des chercheurs du Sud

Le CRDI aide à la formation des scientifiques des pays en développement. L'accent est mis sur la formation professionnelle de façon à aider les chercheurs à compléter des travaux de qualité et à leurs institutions, de bénéficier d'un personnel hautement qualifié.

Le CRDI participe à divers programmes de formation pour répondre aux besoins de la communauté des chercheurs des pays en développement. Le CRDI choisit des candidats dans les projets et les réseaux de recherche qu'il subventionne. Le programme offre surtout une formation spécialisée à court terme, de la formation menant à l'obtention de diplômes supérieurs et des échanges de stagiaires entre institutions.

Bourses accordées dans le cadre de programmes

Almillaegui, José G. (Panama)
Études en vue d'une maîtrise en sciences, spécialité : production animale; Faculté d'agronomie, Pontificia Universidad Católica del Chile, Santiago, Chili

Chaparro, Oscar (Chili)
Études de doctorat en océanologie; Département d'aquaculture, Centre d'océanologie, Université Memorial, St-Jean, NF, Canada

Chavunduka, Davis T. (Zimbabwe)
Études en vue d'une maîtrise en sociologie des soins de santé; Department of Sociology, University of Warwick, Coventry, West Midlands, R-U

CIEP (Uruguay)
Permettre à dix boursiers de l'Uruguay de terminer des études de maîtrise (Abella, Gonzalo; Chiesa, Patricia; Denis, Mercedes; Ferreira, Zoé; Martero, Adriana; Oancea, Lourdes; Ruiz, Mabel; Viera, M. del Carmen; Villagran, Alberto; Viola, Roberto); Centro de Investigación y Experimentación Pedagógica (CIEP), Montevideo, Uruguay

Dang, Thanh Ha (Vietnam)
Études en vue d'une maîtrise en économie agricole; Université des Philippines, Los Baños, Philippines

Dao, La Xuan (Vietnam)
Études en vue d'une maîtrise en économie agricole; Université des Philippines, Los Baños, Philippines

Erome, Emongor V. (Kenya)
Études de doctorat en phytotechnie, spécialité : horticulture; Département d'agriculture, Université de Guelph, Guelph, ON, Canada

Fernandez, Ruben (Bolivie)
Études en vue d'une maîtrise en science, spécialité : sylviculture; Universidad Austral de Chile, Valdivia, Chili

Guerfi, Mokhtar (Algérie)
Effectuer un stage de perfectionnement en vue d'accroître ses compétences en tant que chercheur enseignant; Université de Sherbrooke, Sherbrooke, QC, Canada

Hidalgo, Roberto (Équateur)
Participation au 31^e séminaire sur les stratégies internationales, les politiques industrielles et les technologies; Instituto Latinoamericano y del Caribe de Planificación Económica y Social, Santiago, Chili

Hong, Minh Kim (Vietnam)
Études en vue d'une maîtrise en économie agricole; Université des Philippines, Los Baños, Philippines

Jairath, Jasveen (Inde)
Études postdoctorales en politique technologique et gestion de l'innovation; Institut de recherches économiques en innovation et technologie, Pays-Bas

Kajuna, Silas T.A.R. (Tanzanie)
Études de doctorat en technologie post-écologie; Département d'agriculture, Université de Guelph, Guelph, ON, Canada

Khiem, Nguyen Tri (Vietnam)
Études de doctorat en économie agricole; Département d'économie agricole; Université des Philippines, Los Baños, Philippines

Lamichhane, Shreeram (Népal)
Travaux pratiques pour une analyse

des perspectives de l'éducation informelle au Népal; Centre de recherches pour l'innovation et le développement éducationnels, Université Tribhuvan, Katmandou, Népal

Luu, Duc Hai Thanh (Vietnam)
Études en vue d'une maîtrise en économie agricole; Université des Philippines, Los Baños, Philippines

Mutika, Frédéric (Sénégal)
Entreprendre des études de cycle supérieur pour l'obtention d'un certificat en maladies infectieuses et tropicales; Faculté de Médecine, Université Cheikh Anta Diop, Dakar, Sénégal

Nganda, Benjamin Musembi (Kenya)
Études de doctorat en économie de la santé; Department of Economics, University of York, York, R-U

Nguluma, Alex T. (Tanzanie)
Acheter une thèse de doctorat portant sur les transferts technologiques; Institut d'études pour le développement, Université de Nairobi, Nairobi, Kenya

Ong, Virginia Garcia (Philippines)
Participer à un cours de formation en «Groupage et réorganisation de l'information»; Bibliothèque et Centre de documentation régional, Institut asiatique de technologie, Bangkok, Thaïlande

Ponce del Castillo, Victoria (Pérou)
Études en vue d'une maîtrise en santé communautaire; Universidad Peruana Cayetano Heredia, Lima, Pérou

Rojas, Luis G. (Pérou)
Études en vue d'une maîtrise en administration scolaire; University of New Mexico, Albuquerque, NM, E-U

Rungnapar, Vongvilitra (Thaïlande)
Programme de prémaîtrise en langue anglaise; Institut asiatique de technologie, Bangkok, Thaïlande

Sow, Ababacar (Sénégal)
Assister au cours de gestion de la recherche agricole; Centre de coopération internationale en recherche agricole, Marseille, France

prodigué aux participants une assistance technique et des conseils. Une étude a retracé tous les boursiers (de la Division des bourses en particulier) que le CRDI a aidés au fil des ans. L'étude a permis d'obtenir un certain nombre de renseignements qui, une fois analysés et interprétés, permettront

d'orienter les politiques et les programmes. Une étude a porté sur les orientations et les solutions au perfectionnement des ressources humaines, au soutien de la recherche autonome et des établissements de formation situés en Afrique orientale et australe.

- Un expert-conseil a réalisé une étude sur l'École d'études postuniversitaires rattachée à la University of the West Indies. Celle-ci a permis de recueillir des renseignements fort pertinents pour une analyse globale de l'appui institutionnel accordé par le CRDI.

attirer des fonds pour la création d'un réseau de recherche sur le bamiou, a dressé l'inventaire des recherches réalisées sur ces deux plantes et identifié les lacunes de la recherche actuelle en vue d'approfondir et de mieux orienter les choix des institutions concernées.

- L'avancée des biotechnologies et la tendance à la privatisation de la recherche et de la propriété intellectuelle ont de sérieuses répercussions éthiques et économiques et une grande influence potentielle sur la scène du développement international et de la recherche pour le développement. Dans le dessein de contribuer à la solution des questions cruciales qui surgissent dans ce domaine et de susciter un consensus en la matière, le CRDI a convié de nombreux représentants des pays en développement et des ONG à une rencontre sur le thème de la protection de la propriété intellectuelle. L'atelier était organisé dans le cadre des prestigieuses Rencontres internationales de Keystone sur les ressources génétiques végétales».

- A l'initiation du CRDI, une étude préalable à un projet de plus ample envergure a permis d'observer un échantillon d'émigrants rentés aux Philippines afin de déterminer quel genre de petites entreprises ils avaient pu créer et les facteurs de réussite et d'échec. L'étude pilote a servi à mettre au point des méthodes de recherche et des mesures susceptibles de trouver application sur une plus grande échelle.
- Un atelier de trois jours, sous l'égide du CRDI, a permis de renforcer la coopération entre les organisations non gouvernementales qui oeuvrent en Afrique de l'Ouest, notamment en ce qui a trait au développement durable de la région. La tâche consistait à analyser le rôle des organismes d'aide bilatéraux et multilatéraux qui investissent leurs ressources en Afrique de l'Ouest. Parmi les sujets d'intérêt commun, citons la gestion de la forêt tropicale humide, les questions relatives au milieu marin et à la pêche, la pollution

atmosphérique par l'oxyde de carbone et les émanations industrielles, l'emploi des pesticides de ce pays à recueillir les données socio-économiques et techniques nécessaires pour mieux connaître l'industrie locale de la soie en vue de présenter un plan détaillé de développement.

- Deux contrats ont été accordés en relation avec l'étude menée par la Universidad de los Andes en vue de l'approvisionnement en eau souterraine de la ville de Santa Marta en Colombie. Un ingénieur civil expert en hydrogéologie et en génie sanitaire et un économiste expérimenté en analyse socio-économique ont travaillé ensemble pour éclaircir le cadre socio-économique requis pour réaliser une recharge artificielle à Santa Marta.
- Prix CRDI-OMS sur les femmes et les maladies tropicales. Le CRDI décerne de concert avec l'Organisation mondiale de la santé (OMS) un prix de 5 000 \$ au meilleur article portant sur les femmes et les maladies tropicales. Les chercheurs de différentes parties du monde sont invités à soumettre un essai sur les facteurs socio-économiques qui rendent la femmes particulièrement vulnérables à ces maladies.
- Quatre divisions ont consenti des fonds pour amener les chercheurs du CRDI et d'autres spécialistes du Tiers-Monde à se réunir à Ottawa, lors d'un colloque sur les effets de l'emploi des pesticides sur la santé dans les pays en développement. Le colloque, qui fut un franc succès, a été organisé par le programme Santé et environnement de la Division des sciences de la santé en collaboration avec la Commission internationale pour la médecine du travail.
- Un atelier a été organisé à Montevideo, Uruguay, afin d'aider quatre équipes de chercheurs latino-américains à mettre au point leur propositions de projets de recherche au CRDI. L'accent a été mis sur la méthodologie de recherche des systèmes de santé. Deux experts-conseils et deux représentants de la division ont

invité à aider le ministre laotien de l'Alphabétisation et de l'Éducation des adultes à développer un programme d'éducation informelle post-alphabétisation pour améliorer la qualité de vie. Il a effectué une analyse des priorités de recherche en éducation et inventorié les compétences dont dispose le pays.

- Au Swaziland, un atelier organisé par le Centre d'Afrique australe pour la coopération en recherche agricole (SACCAR) a permis de dresser un plan d'action visant à établir un système d'information agricole dans les pays de la région.
- Une subvention accordée à l'occasion d'un congrès sababique a permis au bibliothécaire en chef de l'université Pertanian Malaysia d'étudier la viabilité des systèmes et des services d'information dans les pays en développement à partir des expériences réalisées dans le cadre des recherches du CRDI.
- Le CRDI a subventionné plus de 20 projets de géomatique y compris en cartographie, en télédétection et sur des systèmes d'information géographique. Les services d'un expert-conseil indépendant ont été retenus pour évaluer ce programme et formuler des recommandations sur les orientations à suivre.
- Les recherches subventionnées par le CRDI ont permis de mettre au point un grand nombre de techniques répondant à des besoins humains élémentaires. Le groupe «Search India» établira une stratégie à long terme visant la diffusion et la commercialisation de ces techniques.
- Le CRDI a recruté un expert-conseil pour évaluer la possibilité de transférer certaines technologies résultant de cinq projets de recherche. L'expert a déjà confirmé que cette possibilité existe dans au moins deux pays.

Le CRDI a aidé l'Association des femmes laotiennes et le ministère de la Science et de la Technologie de ce pays à recueillir les données socio-économiques et techniques nécessaires pour mieux connaître l'industrie locale de la soie en vue de présenter un plan détaillé de développement.

- Deux contrats ont été accordés en relation avec l'étude menée par la Universidad de los Andes en vue de l'approvisionnement en eau souterraine de la ville de Santa Marta en Colombie. Un ingénieur civil expert en hydrogéologie et en génie sanitaire et un économiste expérimenté en analyse socio-économique ont travaillé ensemble pour éclaircir le cadre socio-économique requis pour réaliser une recharge artificielle à Santa Marta.
- Prix CRDI-OMS sur les femmes et les maladies tropicales. Le CRDI décerne de concert avec l'Organisation mondiale de la santé (OMS) un prix de 5 000 \$ au meilleur article portant sur les femmes et les maladies tropicales. Les chercheurs de différentes parties du monde sont invités à soumettre un essai sur les facteurs socio-économiques qui rendent la femmes particulièrement vulnérables à ces maladies.
- Quatre divisions ont consenti des fonds pour amener les chercheurs du CRDI et d'autres spécialistes du Tiers-Monde à se réunir à Ottawa, lors d'un colloque sur les effets de l'emploi des pesticides sur la santé dans les pays en développement. Le colloque, qui fut un franc succès, a été organisé par le programme Santé et environnement de la Division des sciences de la santé en collaboration avec la Commission internationale pour la médecine du travail.
- Un atelier a été organisé à Montevideo, Uruguay, afin d'aider quatre équipes de chercheurs latino-américains à mettre au point leur propositions de projets de recherche au CRDI. L'accent a été mis sur la méthodologie de recherche des systèmes de santé. Deux experts-conseils et deux représentants de la division ont

**90-0333 Libéralisation écono-
mique et réforme structurelle
(Colombie)***
Fundación para la Educación
Superior y el Desarrollo, Bogotá.
Analyser les effets de la libéralisation
et de la restructuring de l'économie,
entrepriées récemment, sur les
marchés financiers, les exportations
et les démunis de la société.
241 540 \$ — 36 mois.

**90-0335 Droits fonciers
ancestraux : statut et perspectives
d'avenir (Philippines)**
Center for Development Programs in
the Cordillera, Baguio. Mener à bien
des recherches sur les droits fonciers
ancestraux des populations
autochtones, qui varient d'un lieu à
l'autre, et le lien de ces droits,
anciens et actuels à la fois, avec les
lois de l'Etat. 16 880 \$ — 18 mois.

**90-0337 La politique en matière
de transport à Mexico : évolution
et répercussions environnementales
(Mexique)**
Colegio de Mexico A.C. Définir une
gamme d'options politiques faisables
pour la gestion des transports publics
de la ville de Mexico de manière à
répondre au double objectif de
satisfaction de la demande et de
réduction de la pollution
atmosphérique. 78 980 \$ — 24 mois.

**90-0338 Ajout d'une composante
sur l'environnement au système
LEAP (Sénégal)***
Environnement et Développement du
Tiers-Monde, Dakar. Prouver
l'efficacité du système Planification
d'alternatives énergétiques à long
terme (LEAP), un modèle de
politique énergétique bien connu,
élargi à la dimension écologique.
34 760 \$ — 15 mois.

**90-0354 Impacts sectoriels des
politiques macro-économiques
d'ajustement (Philippines)***
Institut d'études pour le
développement aux Philippines,
Makati. Elaborer des politiques
macro-économiques prenant en
considération les répercussions des
politiques sur les collectivités
pauvres et encourageant ainsi les
objectifs de stabilisation et
d'ajustement structurel. 149 400 \$ —
12 mois.

**90-1006 Recherche environne-
mentale en Ouganda**
(Ouganda-Canada)
Queen's University, Kingston.
Permettre au Group for Studies in
National and International
Development, en collaboration avec
le Makerere Institute for Social
Research, de financer 16 subventions
d'un an et de 5 000 \$ chacune à des
chercheurs débutants pour des
travaux de recherche sur
l'environnement. 188 500 \$ —
24 mois.

**90-1012 Vers un développement
durable de la Sierra de los Tuxtlas
(Mexique-Canada)**
Centro de Estudios Agrarios, Xalapa,
et l'Université Carleton, Ontario.
Produire l'information et les analyses
nécessaires à la formulation d'une
stratégie de développement
socio-économique durable pour une
réserve bio-économique dans la
Sierra de los Tuxtlas, Veracruz.
226 270 \$ — 24 mois.

**90-1013 Intégration économique
nord-américaine (Mexique-
Canada)**
Colegio de Mexico, Mexico, et
l'Université Carleton, Ontario.
Analyser la faisabilité économique et
politique d'ententes de libre-échange
ou d'ententes d'échanges sectoriels
entre le Mexique, le Canada et les
Etats-Unis. 113 005 \$ — 24 mois.

**90-1027 Importation et transfert
de technologies (Chine-Canada)***
Jiangsu Academy of Social Sciences
et l'Université de la Colombie-
Britannique. Explorer les processus
d'acquisition, d'assimilation et de
diffusion des technologies en Chine.
149 875 \$ — 36 mois.

**90-1046 Evictions et droit au
logement (Global-Canada)***
PLANACT, Afrique du Sud; Centro
de Estudios Sociales y Educación,
Chili; Urban Poor Research Institute,
Corée; Habitat International
Coalition, Mexique; Secretariat
Ejecutivo, Ciudad Alternativa,
République dominicaine; et
l'Université de la Colombie-
Britannique. Faire une analyse
comparative du phénomène des
évictions dans les six pays en
question en vue de sensibiliser le
monde au problème des évictions et
d'aider les organismes concernés à y

répondre avec efficacité. 175 817 \$ — 12 mois.

**Projets préliminaires
des divisions**

En dehors des activités déjà décrites, le CRDI subventionne de nombreux projets, relativement modestes, pour appuyer de multiples façons les activités des divisions. Il s'agit, selon le cas, d'ateliers ou de séminaires sur les priorités de la recherche dans une région ou sur un thème donné, ou bien de permettre aux chercheurs des pays en développement de participer à des réunions avec d'autres experts dans différentes parties du monde ou encore de donner la possibilité à un spécialiste de rendre visite à une équipe de projet pour l'épauler dans sa mission. D'autres fonds sont mis à la disposition des bureaux régionaux du CRDI afin qu'ils puissent organiser des activités analogues dans les régions de leur compétence. La plupart des projets préliminaires couvrent les dépenses des réunions ou des consultations liées, de manière directe ou indirecte, aux recherches financées par le CRDI. Au cours du dernier exercice, le CRDI a approuvé des projets préliminaires avoisinant 6,5 millions de dollars. En voici quelques exemples :

- Avec l'appui du CRDI, un bilan exhaustif de l'état des connaissances sur les aspects techniques, socio-économiques et institutionnels de la gestion de la faune en Afrique orientale et australe a pu être dressé. La comparaison entre l'importance du cheptel et de la faune subnuptiale, d'une part, et les systèmes de production mixte et d'utilisation des sols, de l'autre, est une composante majeure de cette étude. Les données recueillies représentent une bonne base de départ pour le soutien que le CRDI accordera à la recherche dans le domaine de la gestion de la faune.
- Au cours de la dernière décennie, le CRDI a subventionné, dans 10 pays différents, quelque 30 projets de recherche sur le bambou et le rotin. La plupart de ces projets ont fait l'objet d'une mise en réseau à informelle. Une étude, destinée à

- organisations locales et les établissements scientifiques. 1 83 925 \$ — 18 mois.
- 90-0257 Location de chambres : stratégies collectives et recommandations en matière de politiques (Argentine)**
Programa HABITAT, Buenos Aires. Analyser l'évolution du sous-marché de la location de chambres dans des maisons d'appartement et des hôtels dans la ville de Buenos Aires entre 1986 et 1991, de même que les liens avec le marché illégal, et faire des recommandations pour améliorer la situation. 74 110 \$ — 18 mois.
- 90-0262 Système d'apprentissage Education pour tous (Philippines)**
SEAMEO Regional Centre for Educational Innovation and Technology, Quezon City. Accroître l'efficacité de l'enseignement primaire par des approches et méthodes alternatives destinées aux décrocheurs potentiels. 193 350 \$ — 42 mois.
- 90-0264 Population, traditions et développement dans l'ouest de Côte d'Ivoire**
Université nationale de Côte d'Ivoire, Abidjan. Permettre à l'Institut de géographie tropicale de montrer en quoi les hommes, leurs traditions socioculturelles et leur comportement interviennent dans les problèmes de sous-développement que connaît la Sous-Préfecture Centrale. 75 000 \$ — 12 mois.
- 90-0273 Politique macro-économique et les classes populaires (Équateur)**
Facultad Latinoamericana de Ciencias sociales, Quito. Déterminer si les groupes à faible revenu de la région andine sont affectés par les changements dans la macro-économie moderne et si oui, dans quelle mesure. 45 500 \$ — 18 mois.
- 90-0277 Renforcement des compétences de recherche en éducation et en analyse de politiques en Afrique subsaharienne**
Division des sciences sociales, C.R.D.I. Faire une étude et une évaluation critiques de l'état du renforcement des compétences de recherche en éducation et en analyse de politiques en Afrique subsaharienne. 83 220 \$ — 18 mois.
- 90-0281 Violence urbaine : facteurs structurels et réaction des pouvoirs publics (Équateur—Pérou)**
Centro de Estudios Regionales, Guayaquil, et le Centro de Estudios y Promoción del Desarrollo, Lima. Caractériser des tendances dans la délinquance et la criminalité urbaines dans les deux villes durant les années 1980 en s'attachant particulièrement aux conditions favorisant un tel état de choses et faire des recommandations de politiques à cet égard. 61 070 \$ — 18 mois.
- 90-0293 Incidence de la libéralisation au Nigéria***
Nigerian Institute of Social and Economic Research, Ibadan, et le Social Science Council of Nigeria, Ibadan. Établir un réseau national de recherche axé sur les politiques, qui étudiera la libéralisation en relation avec des thèmes tels que la distribution du pouvoir politique, la mobilité sociale, l'éducation et l'emploi, l'environnement, le progrès technologique, l'auto-suffisance économique et la sécurité alimentaire. 404 320 \$ — 42 mois.
- 90-0296 Suivi régional en ce qui concerne l'éducation pour tous (Global)***
Oficina Regional de Educación para América Latina y el Caribe de l'UNESCO, Chili, le Southeast Asian Research Review and Advisory Group, Malaisie, et le Réseau de recherche sur l'éducation en Afrique orientale et australe, Tanzanie. Appuyer des activités de recherche et des activités connexes ayant trait à l'éducation de base dans le cadre des initiatives concernant l'éducation pour tous. 207 300 \$ — 24 mois.
- 90-0301 Effet sur l'environnement de la culture de la banane au Costa Rica : cas à présenter au Tribunal international de l'eau 1992**
Fundación Guilmoté, San José, en collaboration avec l'Instituto Tecnológico de Costa Rica, l'Organización de Estudios Tropicales, l'Universidad de Costa Rica et l'Universidad Nacional de Heredia. Déterminer l'impact environnemental des bananeraies sur l'écosystème aquatique du bassin du Río La Estrella (y compris le récif de corail du Parc national Cahuita) et sur les habitants de la région. On procédera à l'évaluation de
- 90-0313 La génération de la relève : une nouvelle pédagogie pour la jeunesse libanaise***
Bureau pédagogique de la Congrégation des Saints-Coeurs de Jésus et de Marie, Beyrouth. Identifier les références sociales et les idéaux culturels communs entre les jeunes libanais qu'elles que soient leur religion, leur appartenance sociale ou leur origine géographique et jeter les bases d'une pédagogie nouvelle articulée autour d'un sens national dans une société multiculturelle. 118 720 \$ — 24 mois.
- 90-0321 Bourses de recherche en éducation (Kenya—Ouganda—Tanzanie) — Phase II***
Kenya University College, Nairobi, Makerere University, Kampala, et l'Université de Dar es-Salaam. Appuyer et assurer la formation de 15 chercheurs de ces trois pays et consolider les acquis de la première phase en renforçant le processus de sélection et en améliorant la formation, la surveillance et la coordination. 243 710 \$ — 18 mois.

l'environnement au Chili, en Equateur, et au Pérou, là où la population paysanne est importante et où s'observent différents niveaux d'incorporation aux structures de marché au sein des collectivités et entre elles. 330 860 \$ — 36 mois.

90-0187 Migration et urbanisation en Afrique de l'Ouest Centre d'études et de recherches sur la population et le développement, Mali. Permettre à un réseau formé par une quinzaine d'institutions de sept pays de l'Afrique de l'Ouest de faire une étude détaillée sur les mouvements de populations, directions et conséquences socio-économiques et politiques de la migration et de l'urbanisation. 408 031 \$ — 48 mois.

90-0205 Programme de développement municipal (Afrique subsaharienne)* Municipal Development Program Facility, Elias-Unis. Aider les établissements africains à entreprendre une recherche comparée, à des fins d'établissement de politiques, sur le gouvernement local et le développement municipal, dans le cadre d'un vaste programme visant à renforcer la capacité locale de fournir l'infrastructure et les services de base aux populations urbaines de l'Afrique subsaharienne. 250 000 \$ — 27 mois.

90-0209 Vers une même ville : Johannesburg et Soweto (Afrique du Sud)* PLANACT, Johannesburg. Etudier le fonctionnement économique, financier et administratif du gouvernement local du grand Johannesburg-Soweto, ville actuellement divisée par l'apartheid, dans le but d'offrir des possibilités de création d'une seule ville. 45 750 \$ — 18 mois.

90-0210 Réseau d'environnement urbain (Afrique de l'Ouest)* Institut africain de gestion urbaine, Sénégal. Améliorer les connaissances et les pratiques en matière de gestion urbaine en milieu africain avec la création à terme d'un réseau de recherche et d'expertise en vue de produire des éléments d'aide à la décision pour maîtriser le développement urbain. 272 350 \$ — 36 mois.

ajustement structurel
90-0214 Technologie et
90-0221 Valeur des terres et
équité dans la construction
domiciliaire (Kenya)
Université de Nairobi. Permettre à
son Département de géographie
d'analyser les principaux
déterminants de la valeur des terres
des quartiers urbains à revenu faible
et moyen pour évaluer l'influence des
politiques courantes de l'Etat sur la
disponibilité de terrains pour la
construction de logements à prix
abordable. 53 930 \$ — 24 mois.
36 mois.
90-0222 Répercussions écono-
miques de la dette extérieure de
l'Egypte
Arab Centre for Development and
Future Research, Le Caire. Etudier la
possibilité que ce pays élimine ou
réduise considérablement sa dette
extérieure d'ici la fin des années
1990 dans le contexte économique
national et international actuel,
examiner diverses options qui
s'offrent aux décideurs économiques
du pays pour arriver à cette fin, et en
comparer l'efficacité. 36 640 \$ —
17 mois.
90-0230 Efficacité des entreprises
publiques (Soudan)
Kimas Global Ltd, Khartoum.
Permettre à la Faculté des sciences
économiques de l'Université de
Gedra d'étudier l'efficacité des
entreprises publiques au Soudan.
21 240 \$ — 12 mois.
90-0237 Gestion traditionnelle et
moderne des zones humides
(Brésil)*
Universidade de São Paulo, Brésil.
Permettre à l'Instituto Oceanográfico
d'analyser la relation entre les
collectivités locales et les

- 90-0150 Déterminants de l'investissement en agriculture (Égypte)** Université de Mansoura. Permettre au Centre régional de planification et de développement d'analyser les déterminants de l'investissement privé en agriculture dans ce pays, en vue de proposer des moyens d'en augmenter l'efficacité et la pertinence par rapport aux besoins sociaux.
- 90-0152 Libéralisation financière (Afrique)** Centre africain d'études monétaires, Sénégal. Explorer et évaluer les contributions et les limitations éventuelles de la libéralisation financière dans le contexte africain actuel. 131 810 \$ — 12 mois.
- 90-0154 Les femmes et les hommes dans le secteur parallèle urbain (Honduras)** Estudios y Promoción del Desarrollo, Tegucigalpa. Déterminer les composantes du secteur parallèle urbain où le sexe constitue une variable d'organisation. 110 860 \$ — 22 mois.
- 90-0158 Urbanisation et gestion urbaine au Maroc** Association de recherche de l'École nationale d'architecture, Rabat. Produire une connaissance générale sous une forme synthétisée de la politique urbaine en vigueur au Maroc, y compris ses lacunes, ses contradictions internes et ses imperfections, et mettre en place les fondements théoriques et opérationnels d'une gestion urbaine rationnelle. 91 640 \$ — 14 mois.
- 90-0162 Modèles indiens de protection de la forêt tropicale (Colombie)** Centro de Cooperación al Indígena, Bogotá. Analyser les possibilités d'application des modèles indiens traditionnels de protection de la forêt dans ce pays. 63 000 \$ — 12 mois.
- 90-0177 Systèmes agricoles paysans et environnement (Amérique latine)** Grupo de Investigaciones Agrarias, Chili; le Centro Andino de Acción Popular, Equateur; et l'Universidad Nacional de San Antonio Abad del Cusco, Pérou. Analyser la relation entre les systèmes d'exploitation agricole des paysans et
- 90-0120 L'éducation sur mesure en matière d'environnement (Inde)** Centre for Environmental Education (CEE), Ahmedabad. Tester l'applicabilité et la faisabilité de recourir à une base de données environnementales pour créer des programmes d'éducation sur mesure; élaborer un système permettant de mettre sur pied une telle base de données à l'échelle du pays, dans les centres du CBE dans les capitales des États indiens et, sur demande, dans d'autres points du réseau électronique partout dans le pays; et tester les hypothèses et paramètres de base établis lors de la conception du système. 139 500 \$ — 24 mois.
- 90-0121 Marchés financiers et inflation (Argentine) — Phase V** Centro de Estudios de Estado y Sociedad, Buenos Aires. Analyser l'impact des récentes poussées d'hyperinflation sur l'épargne, l'investissement et les finances dans le pays, et évaluer diverses politiques à court ou à long terme qui permettraient de stabiliser l'économie et d'en favoriser la croissance. 179 100 \$ — 36 mois.
- 90-0138 Les futurs viables (Thaïlande)** Thailand Development Research Institute Foundation, Bangkok. Améliorer la gestion des ressources naturelles en vue du développement économique durable de la Thaïlande. 186 260 \$ — 36 mois.
- 90-0145 Économie politique et ajustement structurel (Turquie) — Phase II** Association des sciences sociales de Turquie, Ankara. Évaluer l'impact distributionnel et politique du train actuel de mesures d'ajustement structurel et de politiques des néo-populistes de ce pays, en vue de proposer des solutions de rechange plus équitables et plus durables. 112 090 \$ — 24 mois.
- 90-0085 Indicateurs de la qualité de l'éducation en Amérique latine** UNESCO, Oficina Regional de Educación para América Latina y el Caribe, Chili. Concevoir, élaborer et éprouver un système de mesure et d'amélioration de la qualité de l'enseignement primaire dans certains pays d'Amérique latine. 138 900 \$ — 24 mois.
- 90-0087 Urbanisation des Africains de race noire, différenciation des classes sociales et conflit politique (Afrique du Sud)** University of Durban-Westville, Durban. Permettre à l'Institut for Social and Economic Research de comprendre les causes profondes de la violence dans les zones résidentielles des environs de Durban de sorte que les parties de l'initiative de paix au Natal et les collectivités concenées pourront formuler les réponses constructives indiquées et les appliquer. 153 000 \$ — 36 mois.
- 90-0088 Commission sur le rôle des pays en développement par rapport au changement planétaire (Global)** Division des sciences sociales, CRDI. Mieux comprendre l'importance que revêt pour les pays en développement le changement environnemental mondial et le potentiel des sciences sociales de déterminer les moyens d'éviter et de limiter les problèmes causés par ce changement ou de s'y ajuster. 187 750 \$ — 22 mois.
- 90-0094 Culture et éducation chez les populations quechuas (Équateur)** Corporación Educativa MACAC, Quito. Rassembler et analyser de l'information sur la compréhension qu'ont les Quechuas du rôle des femmes dans la collectivité et son organisation afin d'améliorer les programmes d'éducation destinés à ces populations. 52 780 \$ — 18 mois.
- 90-0109 Mobilité spatiale de la population : nouveau sujet d'étude en Amérique latine** Centro de Estudios de Población, Argentine. Déterminer et évaluer les formes et les tendances émergentes de la mobilité spatiale en Amérique latine, afin de définir les nouveaux
- secteur parallèle et formuler une stratégie d'intervention pour les aider. 18 570 \$ — 18 mois.

- 90-1028 Information et documentation industrielles (Mauritanie-Canada)**
Ministère des Mines et de l'Industrie, Mauritanie, et le Centre de recherche industrielle du Québec. Permettre à la Direction de l'Industrie du ministère de réorganiser son service d'information afin de renforcer son dispositif actuel d'information industrielle et technologique axé sur les brevets. 113 320 \$ — 24 mois.
- 90-1038 Développement d'un système d'information géographique pour la mise en valeur agricole (Maroc-Canada) — Phase II**
Institut agronomique et vétérinaire Hassani II, Rabat, et l'Université de Sherbrooke, Québec. Mettre au point un système d'information agricole géomatique qui permettra de répertorier, collecter et évaluer les ressources d'une région agricole pluviale dans le cadre de la planification et de la mise en valeur agricoles. 210 335 \$ — 36 mois.
- 90-1044 Création de revenus pour les handicapés dans les pays économiquement faibles (Global-Canada)**
Organisation mondiale des personnes handicapées, Manitoaba. Entreprendre une étude exhaustive des stratégies de création de revenus en faveur des personnes handicapées qui ont donné de bons résultats dans différentes régions du monde et d'en divulguer les résultats dans les médias et à l'occasion d'une conférence internationale. 148 500 \$ — 15 mois.
- Sciences sociales 11**
- 90-0005 Secteur parallèle rural (Tanzanie)***
Université de Dar es-Salaam. Faire un recensement pilote dans des régions représentatives de la Tanzanie pour déterminer l'importance du secteur parallèle et celle des différentes activités le composant. 125 740 \$ — 30 mois.
- 11. Les projets subventionnés**
paraissent sous le titre «Projets multidivisionnaires».
- 90-0012 Habitations à louer modique à Bangkok (Thaïlande)**
Asian Institute of Technology, Bangkok. Évaluer le caractère et l'importance des habitations à louer modique et formuler des propositions pour en augmenter le nombre. 80 710 \$ — 18 mois.
- 90-0020 Déforestation et reboisement au Sénégal**
Université Cheikh Anta Diop, Dakar. Permettre à l'Institut des sciences de l'environnement de contribuer à l'amélioration du cadre de vie de la population par la lutte contre la déforestation à partir d'une meilleure connaissance des facteurs de déforestation et d'une étude des actions de reboisement. 57 506 \$ — 18 mois.
- 90-0025 Éducation et emploi : problèmes et tendances de la recherche dans les années 90 (Argentine)**
Centro de Estudios de Población, Buenos Aires. Étudier les changements dans le marché du travail et la relation entre l'éducation et le travail pour déterminer les recherches à faire en éducation qui se répèreraient sur les politiques. À aborder les effets de transformations analogues dans d'autres pays latino-américains. 99 480 \$ — 24 mois.
- 90-0038 L'enseignement de la science et de la technologie dans les écoles du Kenya**
Université Kenyatta, Nairobi. Permettre au département de communication et de technologies éducatives d'améliorer la qualité et l'efficacité de l'enseignement de la science et de la technologie pour en accroître l'impact sur les objectifs de développement social. 100 140 \$ — 24 mois.
- 90-0043 Marchés financiers (Sénégal)**
Centre africain d'études monétaires, Dakar. Étudier les lacunes que présentent les marchés financiers du Sénégal et l'incidence de ces imperfections sur les stratégies financières des entreprises sénégalaises afin de recommander des politiques visant l'amélioration des marchés financiers. 17 355 \$ — 9 mois.
- 90-0084 Le secteur parallèle dans une économie urbaine (Inde)**
Institute of Development Studies, Jaipur. Déterminer les «forces» de certains groupes d'activités du
- 90-0048 Gestion des déchets solides (Équateur)**
Fundación Natura, Quito. Établir une base pour la gestion améliorée des déchets solides en Équateur, le but ultime étant de réduire les effets de la pollution sur la santé et la qualité de vie des humains. 156 620 \$ — 18 mois.
- 90-0062 Ajustement, récession et croissance (Bolivie)**
Universidad Católica Boliviana, La Paz. Permettre à l'Institut de Investigaciones Socioeconómicas d'analyser les facteurs qui favorisent la stabilité macro-économique, d'analyser les facteurs qui ont empêché l'économie bolivienne de dépasser le stade de la stabilisation pour entrer dans une période de croissance, et d'établir des politiques qui favoriseraient le passage à une croissance moyenne ou rapide. 115 500 \$ — 36 mois.
- 90-0065 Évaluation du crédit aux petites entreprises (Pérou)**
Alternativa Centro de Investigación Social y Educación Popular, Lima. Déterminer l'impact économique du programme de crédit chez les bénéficiaires en termes de production, la gestion, la commercialisation et les revenus. 28 140 \$ — 12 mois.
- 90-0066 Gestion et organisation des entreprises du secteur informel (Pérou)**
Centro de Estudios e Investigación Regional, Arequipa. Analyser la performance des micro-entrepreneurs des «peuples jeunes» de la région métropolitaine d'Arequipa, notamment leurs caractéristiques socio-économiques, leurs aptitudes à la gestion et les formes d'organisations de leurs activités économiques, et évaluer ces expériences, qui pourront ainsi servir de modèles pour la conception et l'élaboration de formules pédagogiques de recyclage dans le cadre de programmes d'éducation offerts aux micro-entrepreneurs à faibles revenus. 48 670 \$ — 12 mois.
- 90-0084 Le secteur parallèle dans une économie urbaine (Inde)**
Institute of Development Studies, Jaipur. Déterminer les «forces» de certains groupes d'activités du

- médécine de l'université de déterminer la prévalence des empoisonnements aigus dans deux régions choisies du pays et de procéder à l'essai d'un réseau de services d'information et de lutte anti-poisons afin que les médecins et les auxiliaires de santé bénéficient d'une information prompte et détaillée sur les poisons et la nature des empoisonnements. 90 000 \$ — 24 mois.
- 90-0258 Service d'information sur les cultures tropicales semi-arides (SATCRIS) (Asie du Sud-Afrique) — Phase II**
Institut international de recherche sur les cultures des zones tropicales semi-arides, Inde. Renforcer la capacité du centre régional du SATCRIS à Niamey de diffuser l'information aux utilisateurs et de mettre de nouveaux produits et services à la disposition des systèmes nationaux de recherche agricole. 122 505 \$ — 36 mois.
- 90-0268 Information et ressources nécessaires aux petits paysans pour la production du maïs au Nigéria***
University of Benin, Benin City. Permettre au Département de géographie et d'aménagement régional de la Faculté des sciences sociales d'étudier le mode de diffusion de l'information technologique agricole auprès des cultivateurs de maïs ainsi que son utilisation par ces derniers dans trois états du Nigéria. 22 665 \$ — 18 mois.
- 90-0282 CEHANET — Phase II (Moyen-Orient)**
Organisation mondiale de la santé et le Bureau régional de la Méditerranée orientale, Égypte. Renforcer le réseau national des centres CEHANET (Centre for Environmental Health Activities) et élargir ses services à plusieurs autres pays de la région. 100 000 \$ — 24 mois.
- 90-0284 Système d'information sur la recherche (Burkina Faso)**
Ministère des Enseignements secondaires et supérieur et de la Recherche scientifique, Ouagadougou. Permettre au Secrétaire exécutif du Banwû de constituer au Burkina Faso un système permanent d'information servant à la fois d'instrument de gestion, de coordination et de suivi de
- la recherche, et d'outil de référence pour les chercheurs, les instituteurs de recherche, et les pays donateurs. 81 056 \$ — 24 mois.
- 90-0305 Système pilote d'information sur les coopératives (Tanzanie) — Phase II***
Co-operative College, Moshi. Mettre sur pied un système pilote d'information sur les coopératives agricoles en mettant à contribution la base de données élaborée durant la phase I, afin d'exercer un contrôle efficace et de faciliter le traitement des données sur les coopératives. 133 395 \$ — 24 mois.
- 90-0306 Système d'enregistrement et de gestion de la dette (Guyana)**
Ministry of Finance, Georgetown. Enregistrer, contrôler et analyser la dette existante et les mouvements de fonds à l'intérieur du pays et autre, améliorant ainsi la qualité de l'information sur les fonctions de gestion de la dette. 38 670 \$ — 12 mois.
- 90-0314 Accès à l'information (Inde)**
Consumer Education and Research Centre, Ahmedabad. Étudier les questions liées à l'accès à l'information dans ce pays et contribuer au débat public et à la participation entourant la préparation de la modification proposée par le gouvernement à la Loi sur les secrets officiels. 51 170 \$ — 12 mois.
- 90-0316 Base de données du SACCAR pour l'évaluation des ressources dans le domaine de la recherche agricole (Afrique australe) — Phase préliminaire**
Southern African Centre for Co-operation in Agricultural Research, Botswana. Mettre sur pied un système d'information de gestion informatisé afin de soutenir efficacement la planification de la recherche agricole et l'affectation des ressources et de favoriser la coopération régionale dans les domaines de la recherche agricole et de la formation au Southern African Development Co-ordination Conference (SADCC). La phase préliminaire sera consacrée à l'évaluation des besoins et à la recherche des solutions plus appropriées pour l'installation du
- système d'information de gestion de la recherche sur micro-ordinateurs. 69 125 \$ — 12 mois.
- 90-0329 Réseau d'information Femmes et développement (Costa Rica) — Phase II***
Asociación Femenina, Programa Nacional de Asesoría y Capacitación para la Mujer Cooperativista, San José. Permettre au Programa de Information para la Mujer d'améliorer le réseau, ainsi que ses produits et services, et d'étendre sa portée aux femmes et au domaine de la santé. 110 000 \$ — 24 mois.
- 90-0334 Réseau d'information des femmes (Pérou)***
Centro de Documentación e Comunicación Educativa—Mujer, Lima. Permettre à l'EPRA-M, une petite organisation non gouvernementale, de mettre sur pied un réseau d'information reliant les associations féminines du Pérou aux décideurs en matière de condition féminine et aux moyens de communication de masse à l'échelle nationale et régionale. 49 500 \$ — 18 mois.
- 90-1011 Système d'information géographique appliqué à la gestion de l'eau (Égypte—Canada)**
Energy, Mines et Ressources, Ottawa, en collaboration avec le Walter Research Centre, le Caire. Mettre au point un système d'information géographique pour la conservation, le traitement et l'analyse des données à l'appui de la gestion à court et à long terme des ressources en eau de l'Égypte, système qui sera utilisé en conjonction avec des modèles hydrologiques spatiaux. 206 650 \$ — 30 mois.
- 90-1026 Les langues écrites de la Chine (Chine—Canada) — Phase II**
Institute of Nationality Studies, Chine, et l'Université Laval, Québec. Fournir aux autorités chinoises l'information scientifique nécessaire à la formation et à la mise en oeuvre d'une politique de planification en matière de langues, et diffuser cette information aux chercheurs de la Chine et d'autres pays multi-ethniques, et renforcer leurs capacités de recherche. 200 500 \$ — 24 mois.

- possible des produits agricoles de première nécessité. 100 000 \$ — 18 mois.
- 90-0039** Information au service du développement rural et urbain (Chili) — Phase II
Centro de Estudios en Tecnologías Apropriadadas para América Latina, Valparaíso. Renforcer ses capacités en matière d'information dans le domaine des technologies appropriées, tout en décentralisant le service et en entreprenant graduellement des activités génératrices de revenu. 122 010 \$ — 36 mois.
- 90-0045** Réseau de documentation sur les ressources pour les enfants (Amérique latine)
Banco del Libro, Venezuela. Aider le centre de documentation de cette ONG à élargir ses services et accroître le nombre de ses usagers au Venezuela et dans toute la région de l'Amérique latine et des Antilles. 84 500 \$ — 24 mois.
- 90-0047** Réseau d'information sur les entreprises publiques dans les pays en développement : projet pilote (Global)
Centre international pour les entreprises publiques dans les pays en développement, Yougoslavie. Accroître l'efficacité et la productivité des entreprises publiques grâce à de meilleurs systèmes d'information de gestion, pour s'assurer qu'elles s'acquittent adéquatement de leur rôle d'instruments de développement industriel et économique et éviter qu'elles ne deviennent un fardeau économique. 77 290 \$ — 18 mois.
- 90-0051** Système d'enregistrement et de gestion de la dette — Phase II (Antilles)
Eastem Caribbean Central Bank, Saint-Christophe-et-Névis. Aider les ministères des Finances des pays qui en sont membres à enregistrer, surveiller et analyser la dette existentielle, les subventions de l'extérieur, la dette intérieure et d'autres mouvements de fonds. 200 000 \$ — 24 mois.
- 90-0064** Système d'information au service de la production animale en Amérique latine et dans les Antilles
Instituto Interamericano de Cooperación para la Agricultura, International, Kenya. Consolider les initiatives des ONG et s'en inspirer
- 90-0141** Mise en place d'un réseau électronique pour les ONG africaines à vocation environnementale
Environment Liaison Centre International, Kenya. Consolider les initiatives des ONG et s'en inspirer
- 90-0139** Système de gestion et d'enregistrement de la dette (Iles Vierges britanniques)
Ministère des Finances, Road Town. Permettre au Trésorier de se familiariser avec l'enregistrement, le suivi et l'analyse de la dette existentielle et des mouvements de fonds nationaux et autres par le biais du CS/DRMS, et d'améliorer ainsi la qualité de l'information en ce qui a trait aux systèmes de gestion de la dette. 18 000 \$ — 12 mois.
- 90-0157** Système d'enregistrement et de gestion de la dette et des subventions (République démocratique populaire lao)*
Ministère de l'Economie, de la Planification et des Finances, Vientiane. Aider le gouvernement lao à atteindre ses objectifs de développement économique et social en améliorant la gestion des informations relatives aux prêts extérieurs, subventions et autres mouvements de fonds et en assurant que les paiements au titre du service de la dette se maintiennent à des niveaux viables. 68 520 \$ — 36 mois.
- 90-0254** Réseau de services d'information et de lutte anti-poisons (Philippines)
University of the Philippines, Quezon City. Permettre à la Faculté de Hôpital attachée à la Faculté de
- 90-0146** Centre régional africain pour les sciences de l'information (CRASI)
Permettre à l'Université d'Ibadan, Nigéria, de fournir le soutien initial à la création d'un centre régional africain pour les sciences de l'information, qui sera un institut autonome de la Faculté d'éducation de l'université. 125 000 \$ — 12 mois.
- 90-0155** Étude de marché sur l'utilisation de l'information de gestion en Inde
Indian Institute of Management, Ahmedabad. Faire une étude de marché en Inde pour évaluer les besoins en matière d'information de gestion des travailleurs de la santé, de l'énergie, de l'agriculture, de l'éducation, des transports et de l'enseignement et de la recherche dans le commerce, dans l'industrie et dans le secteur public. 57 000 \$ — 16 mois.
- 90-0157** Système d'enregistrement et de gestion de la dette et des subventions (République démocratique populaire lao)*
Ministère de l'Economie, de la Planification et des Finances, Vientiane. Aider le gouvernement lao à atteindre ses objectifs de développement économique et social en améliorant la gestion des informations relatives aux prêts extérieurs, subventions et autres mouvements de fonds et en assurant que les paiements au titre du service de la dette se maintiennent à des niveaux viables. 68 520 \$ — 36 mois.
- 90-0068** Réseau de l'Afrique orientale et australe
University of Nairobi, Kenya. Faire l'essai de la création de réseaux informatisés pour acquérir les compétences et les connaissances technologiques voulues et promouvoir une communication plus efficace et plus efficiente au sein de la collectivité des chercheurs de la région. 148 070 \$ — 24 mois.
- 90-0090** Développement de la communication informatisée dans les Antilles (ECLAC)
Economic Commission for Latin America and the Caribbean (ECLAC), Trinidad, Élargir et faciliter l'utilisation de la télématique informatisée par divers usagers oeuvrant dans divers aspects du développement; favoriser une plus grande utilisation des bases de données et des systèmes d'information, et aussi un plus grand échange d'information à point nommé avec les usagers; et améliorer la circulation d'information pour le développement social et économique dans les Antilles. 284 220 \$ — 30 mois.
- 90-0139** Système de gestion et d'enregistrement de la dette (Iles Vierges britanniques)
Ministère des Finances, Road Town. Permettre au Trésorier de se familiariser avec l'enregistrement, le suivi et l'analyse de la dette existentielle et des mouvements de fonds nationaux et autres par le biais du CS/DRMS, et d'améliorer ainsi la qualité de l'information en ce qui a trait aux systèmes de gestion de la dette. 18 000 \$ — 12 mois.
- 90-0141** Mise en place d'un réseau électronique pour les ONG africaines à vocation environnementale
Environment Liaison Centre International, Kenya. Consolider les initiatives des ONG et s'en inspirer
- 90-0144** Services d'information sur les communications (Pérou)
Permettre à l'Instituto para América Latina, Lima, de participer à la définition d'une structure appropriée pour un réseau national d'information sur les communications au Pérou. 37 020 \$ — 12 mois.
- 90-0146** Centre régional africain pour les sciences de l'information (CRASI)
Permettre à l'Université d'Ibadan, Nigéria, de fournir le soutien initial à la création d'un centre régional africain pour les sciences de l'information, qui sera un institut autonome de la Faculté d'éducation de l'université. 125 000 \$ — 12 mois.
- 90-0155** Étude de marché sur l'utilisation de l'information de gestion en Inde
Indian Institute of Management, Ahmedabad. Faire une étude de marché en Inde pour évaluer les besoins en matière d'information de gestion des travailleurs de la santé, de l'énergie, de l'agriculture, de l'éducation, des transports et de l'enseignement et de la recherche dans le commerce, dans l'industrie et dans le secteur public. 57 000 \$ — 16 mois.
- 90-0157** Système d'enregistrement et de gestion de la dette et des subventions (République démocratique populaire lao)*
Ministère de l'Economie, de la Planification et des Finances, Vientiane. Aider le gouvernement lao à atteindre ses objectifs de développement économique et social en améliorant la gestion des informations relatives aux prêts extérieurs, subventions et autres mouvements de fonds et en assurant que les paiements au titre du service de la dette se maintiennent à des niveaux viables. 68 520 \$ — 36 mois.
- 90-0254** Réseau de services d'information et de lutte anti-poisons (Philippines)
University of the Philippines, Quezon City. Permettre à la Faculté de Hôpital attachée à la Faculté de

Nouveau-Brunswick. Mettre au point des méthodes qui permettront la valorisation des algues rouges de la côte sud du Sénégal grâce au développement local de kappa-cartagénhane. 494 000 \$ — 36 mois.

90-1025 Tabersonine
(Cameroon-Camada*)
l'Université de l'Alberta, Meitre au
point une technologie de production
de labersonine à petite échelle au
Cameroon. 388 700 \$ — 48 mois.

90-1031 Films multicouches en polyéthylène (Jordanie—Canada) — Phase II

Société royale des sciences, Arnam, et l'Université McGill, Québec. Produire, en Jordanie, un nouveau film multicoches en polyéthylène dans lequel entreront des films dégradés et usés et qui aura une durée utile plus longue et sera moins coûteux que les films actuellement vendus. 314 000 \$ — 36 mois.

Sciences de l'information¹⁰

90-0008 Information
technologique tirée des brevets
(Afrique)
African Regional Industrial Property
Organization, Zimbabwe. Améliorer
et renforcer ses activités en se servant
d'informations tirées des brevets pour
favoriser le développement industriel
et économique de ses États membres.
225 740 \$ — 24 mois.

90-0009 Centre de ressources
MINISIS (Amérique latine)
Universidad Nacional Autónoma de
México, México. Permite au
Centro de Información Científica y
Humanística d'ouvrir un centre de
recursos MINISIS pour offrir des
services en espagnol aux utilisateurs
anciens et nouveaux dans la région, et
de les aider à utiliser efficacement le
logiciel pour automatiser leurs
services de gestion et de distribution
de l'information. 180 070 \$ —
36 mois.

10. Les projets subventionnés conjointement avec une autre division paraissent sous le titre « Projets multidivisionnaires ».

90-0010 Programme d'information intégrée sur la noix de coco (APCC)

Renforcer d'avantage les activités de l'APCC en matière d'information en établissant un système d'information cohérent et viable qui aide la direction à améliorer la production, le conditionnement et la commercialisation de la noix de coco. 361 725 \$ — 36 mois.

90-0011 **Librairies**
communautaires (Equateur)
Centro para el Desarrollo Social,
Quito. Appuyer au niveau des
organisations de base une campagne
permanente de promotion de la
lecture d'ouvrages, périodiques et
feuilles à caractère pédagogique et
littéraire, produits par les organismes
équatoriens de recherche et d'action
communautaire. 40 000 \$ — 24 mois

90-0014 Système d'information ouest-africain sur le riz (SIOAR) Association pour le développement de la riziculture en Afrique de l'Ouest (ADRAO), Côte d'Ivoire. Renforcer et perfectionner les services de

36 mois.

90-0016 Évaluation des besoins d'information sur la gestion de l'irrigation (Global International Irrigation Management Institute, Sri Lanka. Aider les chargés de l'irrigation dans les pays en développement à déterminer leurs besoins d'information interne et externe et créer ensuite le système qui répondra à ces besoins. 196 370 \$ — 15 mois.

90-0017 Vulgarisation de
systèmes d'enregistrement et de
gestion de la dette (Global)
Division des sciences de
l'information, CRDI, Aider les
services de gestion de la dette (des
ministères des Finances ou des
ministères de l'Énergie et des
Ressources naturelles)

dans les pays en développement à enregistrer, surveiller et analyser les dettes et subventions extérieures et d'autres mouvements de fonds en mettant à la

disposition des pays hors Commonwealth le CS-DRMS, en vue d'améliorer la qualité de leurs composantes « information ». 528 750 \$ — 36 mois.

90-0019 Décentralisation des services d'information industrielle (Pérou)
Instituto de Investigación Tecnológica Industrial y de Normas Técnicas, Lima, et le Programa de Fomento de la Pequeña Empresa Industrial, Trujillo. Découvrir les services d'information technologique de l'INTEC afin de répondre adéquatement aux besoins des villes pauvres et des villages éloignés de la capitale. 271 075 \$ — 24 mois.

90-0022 Documentation sur les ressources génétiques nationales (Global)
Conseil international des ressources phylogénétiques, Italie. Fournir des services d'experts, des conseils et une méthode concrète pour mettre au point et mettre en oeuvre un service viable de documentation sur les ressources génétiques au sein de programmes nationaux et locaux.
271 705 \$ — 19 mois.

90-0027 Système africain d'information sur l'eau et l'assainissement (Afrique centrale et occidentale) — Phase II Comité interafricain d'études hydrauliques (CIEH), Burkina Faso. Mettre en place un réseau d'information pilote sur l'eau et l'assainissement parmi les pays membres du CIEH. 150 680 \$ — 24 mois.

90-0028 Expérimentation du disque optique numérique (DON) : état civil (Sénégal)
Délégation à l'informaticque, Dakar.
Expérimenter le DON pour l'archivage des données, pour permettre un choix approprié à l'amélioration de l'exploitation des informations enregistrées sur les registres d'état civil. 165 680 \$ — 18 mois.

90-0029 Réseau d'information en créole : commercialisation (Haïti) Institut haïtien de coopération et d'études latino-américaines et caribéennes, Port-au-Prince. Mettre en place un réseau d'information susceptible de favoriser à moyen terme une fixation la plus réaliste

Sciences de la terre et du génie⁹

le SIDA au sein de l'organisation syndicale. 74 759 \$ — 24 mois.

90-0001 Sable de fonderie

(Jordanie) Royal Scientific Society, Amman. Permettre au Mechanical Design and Technology Centre de mesurer au point une technologie de moulage au sable adaptée aux genres de sable et de liants disponibles localement, et d'introduire de saines pratiques de contrôle du sable dans le secteur des fonderies. 135 800 \$ — 24 mois.

90-0003 Grand Yaéré (Cameroun)

Ministère de l'Enseignement supérieur, de l'Informatique et de la recherche scientifique, Yaoundé, et l'Université Cheikh Anta Diop, Sénégal. Obtenir une meilleure connaissance de l'hydrologie et de l'hydrogéologie du Grand Yaéré, de façon à assurer l'approvisionnement en eau de la région et à accroître le taux de réussite des campagnes de forage. 245 900 \$ — 36 mois.

90-0163 Industrie du cuir

(Uruguay)* Universidad de la República Oriental del Uruguay, Montevideo. Laboratorio Tecnológico del Uruguay, Montevideo. Concevoir des méthodes qui permettront d'accroître l'efficacité dans l'industrie du tannage et de rendre cette dernière plus viable sur le plan économique, en augmentant le taux d'utilisation, par tonne de cuir produit, des produits chimiques employés pour le tannage, en réduisant la pollution associée au rejet des déchets dans l'environnement, ou en y mettant fin, et en améliorant la santé des travailleurs et en aval des tanneries. 264 400 \$ — 36 mois.

90-0327 Techniques de fonderie

(Kenya)* Université de Nairobi et l'Organisation pour le développement des petites et moyennes entreprises, Turquie. Améliorer les techniques de fonderie utilisées au Kenya en 9. Les projets subventionnés conjointement avec une autre division paraissent sous le titre «Projets multivisionnaires».

partageant le savoir-faire acquis dans un projet semblable en Turquie. 249 650 \$ — 36 mois.

90-1001 Plantes aromatiques

(Maroc-Canada) Institut agronomique et vétérinaire Hassan II, Rabat, et Agriculture Canada, Québec. Optimiser l'exploitation de certaines plantes aromatiques du Maroc. 219 600 \$ — 24 mois.

90-1002 Système d'information

international sur l'exploitation minière à petite échelle (Inde-Canada)* National Institute of Small Mines, Calcutta, et Small Mining International, Québec. Entreprendre l'élaboration d'un système international d'information sur l'exploitation minière à petite échelle qui faciliterait l'échange d'information et d'expertises entre pays, et qui comprendrait la mise au point d'un service national d'information en Inde. 347 959 \$ — 36 mois.

90-1003 Gravelles latéritiques

(Niger-Canada) Ecole des mines et de la géologie, Niamey, et l'Université de Moncton, Nouveau-Brunswick. Déterminer les relations entre les caractéristiques physiques des sols latéritiques et leur comportement mécanique et hydrologique, de façon à définir un système de classification pouvant faciliter la conception et l'entretien des routes dans les pays de l'Afrique de l'Ouest. 246 100 \$ — 36 mois.

90-1004 Gestion des nappes des

Niayes (Sénégal-Canada) Université Cheikh Anta Diop, Dakar, et l'Université Laval, Québec. Mesurer au point des techniques pour une exploitation optimale des eaux souterraines de la zone des Niayes sur le littoral nord du Sénégal. 374 596 \$ — 36 mois.

90-1005 Fabrication de films à

partir de déchets de polyéthylène recyclés (Égypte-Canada)* Centre national de recherche, Le Caire, la Société royale des sciences, Jordanie, et l'Université McGill, Québec. Transférer et optimiser la technologie mise au point en Jordanie en l'adaptant aux matières premières, aux conditions climatiques et aux procédés de recyclage des films de

plastiques qui existent aujourd'hui en Égypte. 231 700 \$ — 36 mois.

90-1008 Colorants

anthocyaniques (Burkina Faso-Canada) — Phase II* Université Simon Fraser, Vancouver, Colombie-Britannique. Valoriser les colorants anthocyaniques du sorgho pour les marchés régionaux et internationaux. 240 000 \$ — 24 mois.

90-1009 Sols dilatables

(Chine-Canada) Université Tsinghua, Beijing, et l'Université de la Saskatchewan, Saskatoon. Trouver des solutions pratiques pour limiter les problèmes provoqués par les sols dilatables, i.e., des sols qui s'étendent avec l'humidité et se contractent avec la sécheresse. 297 765 \$ — 36 mois.

90-1014 Sols dilatables

(Kenya-Canada)* University of Nairobi et l'Université de la Saskatchewan, Saskatoon. Étudier une méthodologie de conception et d'aménagement de routes sur les sols marginaux du Kenya. 283 028 \$ — 36 mois.

90-1019 Liants pour la

fabrication de panneaux de bois (Tanzanie-Canada) Tanzania Industrial Research and Development Organization, Dar es-Salaam, et FORINTREK Canada Corporation, Ottawa. Créer des liants à base de bonne qualité et à prix modique à base de résines de formaldéhyde en se servant de baume de cajou. 288 200 \$ — 36 mois.

90-1020 Lutte contre la

subsidence, par alimentation artificielle (Thaïlande-Canada)* Asian Institute of Technology, Bangkok, et l'Université McGill, Québec. Mesurer au point les techniques et les méthodes appropriées de façon à mesurer les affaissements du sol à Bangkok. 298 530 \$ — 36 mois.

90-1024 Valorisation des algues

rouges (Sénégal-Canada)* Université Cheikh Anta Diop, Dakar, SOS-Environnement, Lycee Delafosse, Dakar, Pêches et Océans, Ottawa, et l'Université du

- 90-0243 Forum international de la recherche sur le SIDA (Global)***
Institut of Medicine, Etats-Unis.
Permettre au National Academy of Sciences d'améliorer la coordination et la communication entre les établissements qui financent des recherches sur le SIDA par le biais d'un forum dont les objectifs seront : l'identification des besoins en matière de recherches; l'optimisation des fonds; et la préparation pour des essais cliniques des vaccins et des thérapies attendus. 50 000 \$ — 36 mois.
- 90-0261 Counseling et éducation relatifs au SIDA (Sénégal)***
Association nationale des assistants sociaux et Aides spécialisés, Dakar.
Permettre à l'Ecole nationale des assistants sociaux et Aides spécialisés de promouvoir, parmi les spécialistes de promouvoir, parmi les travailleurs en éducation sanitaire et le counseling sur le SIDA. 50 184 \$ — 12 mois.
- 90-0274 Ecologie et prévention de la fièvre jaune (Nigéria)***
University of Ibadan. Permettre au département de virologie d'évaluer les facteurs collectifs et liés à l'environnement qui influencent l'apparition de la fièvre jaune, afin d'établir une stratégie préventive et un contrôle efficaces. 222 090 \$ — 36 mois.
- 90-0278 Essai d'intervention contre la bilharziose à l'aide d'une plante molluscicide : la phytoquade dodecandra* (Mali)**
Ministry of Health, Causway.
Permettre au Blair Research Laboratory de déterminer l'efficacité de l'acceptabilité et la rentabilité de l'utilisation d'un molluscicide végétal, *Phytolacca dodecandra*, pour réduire la morbidité et la transmission de la bilharziose après chimiothérapie. 242 290 \$ — 48 mois.
- 90-0288 Les communications en santé internationale au Canada — Phase III***
Association des universités et collèges du Canada, Ottawa.
Promouvoir et améliorer «Synergie», son bulletin trimestriel bilingue, pour suivre la mise sur pied du bulletin électronique et collaborer avec d'autres groupes dans le développement d'une base de données de projets canadiens, de l'expertise et des possibilités dans le domaine de la santé internationale. 162 845 \$ — 24 mois.
- 90-0295 Utilisation sans danger des pesticides (Thaïlande)***
Université Chulalongkorn, Bangkok.
Permettre au Département de pharmacologie, Faculté des sciences pharmaceutiques, d'améliorer la stratégie qui incitera les paysans à manipuler et à utiliser de manière sûre les pesticides et les éduquera dans ce sens. 69 730 \$ — 24 mois.
- 90-0297 Système de santé en Uruguay**
Centro de Estudios de la Realidad Económica y Social, Montevideo.
Suivre et apprécier l'évolution et la performance des organismes d'assistance médicale collective, en mettant l'accent sur leur lien avec le secteur public, de façon à ce que le ministère de la Santé puisse élaborer et mettre en oeuvre des politiques appropriées. 203 580 \$ — 18 mois.
- 90-0303 L'excision chez les femmes kényennes***
Moi University, Eldoret. Permettre au Département d'anthropologie d'entreprendre des recherches sur les motivations socioculturelles qui sont à l'origine de l'excision féminine dans nombre de collectivités et d'informer les personnes intéressées des effets de cette pratique sur la santé de ces femmes et leurs enfants. 14 287 \$ — 12 mois.
- 90-0322 Leishmaniose cutanéo-muqueuse amazonienne dans les Andes péruviennes (Pérou)**
Centro de Investigación y Promoción Amazónica, Lima. Etudier les dimensions sociales de la leishmaniose cutanéo-muqueuse, notamment les migrations saisonnières dans le Sud-Est du Pérou; analyser la réponse de la collectivité à cette maladie en vue de contribuer à la recherche portant sur une réforme éventuelle du système sanitaire actuel basé sur une participation pleinement démocratique de la collectivité. 246 851 \$ — 36 mois.
- 90-0330 Utilisation des services de santé (Haïti)***
Association de santé publique d'Haïti, Port-au-Prince. Etudier les facteurs déterminants de la sous-utilisation des services de santé
- 90-0335 Le VIH et le mouvement syndical (Afrique du Sud)***
Johannesburg. Permettre au Transport and General Workers Union de recueillir l'information apte à déterminer les besoins liés à l'apparition du SIDA (syndrome d'immunodéficience acquise) et d'utiliser ces données en vue de la mise en oeuvre d'un programme éducatif global et d'une politique sur
- 90-0349 Comprendre le comportement sexuel à risque élevé (Kenya)***
Université de Nairobi. Permettre aux Départements de psychologie et de microbiologie médicale de mieux comprendre le comportement sexuel favorisant l'acquisition et la transmission des maladies transmissibles sexuellement (MTS) et du virus de l'immunodéficience humaine (VIH) et d'évaluer l'efficacité du counseling de groupe en tant que stratégie de prévention auprès d'une population d'individus dont l'exposition élevée au risque a été établie. 50 546 \$ — 18 mois.
- 90-0355 Le VIH et le mouvement syndical (Afrique du Sud)***
Johannesburg. Permettre au Transport and General Workers Union de recueillir l'information apte à déterminer les besoins liés à l'apparition du SIDA (syndrome d'immunodéficience acquise) et d'utiliser ces données en vue de la mise en oeuvre d'un programme éducatif global et d'une politique sur
- 90-0340 Eau et assainissement (Zimbabwe)***
University of Zimbabwe, Harare. Permettre au Training Centre for Water and Sanitation d'améliorer la capacité des étudiants de 3^e cycle d'entreprendre des projets de recherche dans le domaine de l'eau et l'assainissement. 50 000 \$ — 12 mois.
- 90-0336 Elaboration d'un modèle d'évaluation des systèmes de santé locaux (Argentine)***
Centro de Apoyo al Desarrollo Local, Buenos Aires. Elaborer, évaluer et diffuser un modèle d'évaluation exhaustif des systèmes locaux de santé. 152 040 \$ — 12 mois.
- 90-0331 Réseau de recherche sur le SIDA en Afrique centrale et occidentale***
Secrétariat africain du réseau de recherche sur le SIDA, Sénégal.
Consolider la recherche multidisciplinaire sur le SIDA afin de promouvoir l'action préventive dans la région au moyen de l'organisation d'un programme de subventions modestes et de quelques ateliers sur la recherche. 160 800 \$ — 24 mois.
- 90-0336 Elaboration d'un modèle d'évaluation des systèmes de santé locaux (Argentine)***
Centro de Apoyo al Desarrollo Local, Buenos Aires. Elaborer, évaluer et diffuser un modèle d'évaluation exhaustif des systèmes locaux de santé. 152 040 \$ — 12 mois.
- 90-0340 Eau et assainissement (Zimbabwe)***
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- déterminer et d'analyser les aspects perceptuels et comportementaux des problèmes liés à la ménopause qui ne nécessitent pas de traitement médical, en vue d'aider les femmes ménopausées à bien faire face à leur situation. 52 682 \$ — 26 mois.
- 90-0193 Recherche en matière d'environnement (Zambie)***
Ministry of Mines, Kitwe. Permettre aux Mines Safety Department de déterminer la nature de la pollution de l'eau dans le bassin hydro-graphique de la rivière Kafue à Chingola et d'appliquer cette information au renforcement de la capacité du département de remplir ses fonctions de réglementation et de conseil. 81 630 \$ — 12 mois.
- 90-0194 Défluorisation de l'eau domestique (Kenya)**
Kenya Medical Research Institute, Nairobi. Permettre au Medical Research Centre d'installer des appareils de défluorisation au charbon d'os testés en laboratoire dans les maisons des collectivités où l'eau a une forte teneur en fluor, et d'en étudier l'acceptabilité et l'efficacité. 34 271 \$ — 18 mois.
- 90-0196 Comportement sexuel et MTS chez les routiers (Kenya)***
University of Nairobi. Permettre au Département de microbiologie médicale de mieux comprendre le jeu entre le comportement et les facteurs biologiques dans l'incidence des maladies transmises sexuellement (MTS) dans une cohorte de routiers et d'éprouver l'efficacité d'un programme d'intervention visant à modifier le comportement et à réduire l'incidence des MTS. 146 771 \$ — 24 mois.
- 90-0197 Déterminants sociaux et médicaux de la mortalité périnatale (Nigeria)***
Obafemi Awolowo University, Ile-Ife. Permettre à son Département d'obstétrique et de gynécologie d'établir les facteurs sociaux et biomédicaux responsables de la mortalité périnatale en étudiant tous les accouchements, incluant ceux qui ont eu lieu à domicile, dans la municipalité de Oramyan de l'État d'Oyo. 119 325 \$ — 36 mois.
- 90-0219 Troubles associés à la carence en iode (Ghana)**
University of Ghana, Accra. Permettre au Département de nutrition et des sciences de l'alimentation d'établir la prévalence et l'étiologie des troubles associés à la carence en iode dans certaines collectivités, les universités et le communautaire en association avec CIMDER de faire de la recherche Rural, Cail. Accroître la capacité du CIMDER de faire de la recherche Multidisciplinaires en Desarrollo Centro de Investigaciones Phase III*
- 90-0217 CIMDER (Colombie) — Phase III***
un lieu. 173 568 \$ — 12 mois.
- 90-0231 Système de gestion de l'information hospitalière (Colombie) — Phase III**
Seguridad Social, Bogotá. Apporter une contribution à la modernisation de la gestion hospitalière en fournissant un outil concret qui favorise la gestion participative par objectif, tout en établissant une culture hospitalière de services efficaces, économiques et compatibles. 159 670 \$ — 18 mois.
- 90-0235 Mortalité infantile dans le district de South Kanara (Inde)***
Kasturba Medical College, Manipal. Permettre à son Département de médecine communautaire d'étudier les facteurs influant sur la mortalité infantile dans les districts de Dakshina Kannada et de Dharwad. 64 580 \$ — 30 mois.
- 90-0229 Épidémiologie de l'hépatite C (Chine)***
Université médicale de Shanghai. Déterminer l'importance épidémiologique de l'hépatite C récemment décelée chez la population générale de Shanghai et chez les malades atteints d'hépatite aiguë. 61 900 \$ — 36 mois.
- 90-0231 Système de gestion de l'information hospitalière (Colombie) — Phase III**
Fundación la Previsora para la Seguridad Social, Bogotá. Apporter une contribution à la modernisation de la gestion hospitalière en fournissant un outil concret qui favorise la gestion participative par objectif, tout en établissant une culture hospitalière de services efficaces, économiques et compatibles. 159 670 \$ — 18 mois.
- 90-0226 Santé mentale (Brésil)**
Universidade Federal da Bahia, Canela. Permettre au Département de médecine préventive et sociale de rassembler l'information sur la façon dont la collectivité identifie et traite des cas de maladies mentales en vue de mettre sur pied des services de santé mentale adaptés à la société et à la culture pour que la collectivité puisse davantage s'occuper des personnes atteintes de maladie mentale. 194 550 \$ — 24 mois.
- 90-0229 Épidémiologie de l'hépatite C (Chine)***
Université médicale de Shanghai. Déterminer l'importance épidémiologique de l'hépatite C récemment décelée chez la population générale de Shanghai et chez les malades atteints d'hépatite aiguë. 61 900 \$ — 36 mois.
- 90-0225 Santé mentale (Pérou)**
Universidad Peruana Cayetano Heredia, Pérou. Rassembler l'information sur la façon dont la collectivité identifie et traite des cas de maladies mentales en vue de mettre sur pied des services de santé mentale adaptés à la société et à la culture pour que la collectivité puisse davantage s'occuper des personnes atteintes de maladie mentale. 99 260 \$ — 24 mois.
- 90-0206 Gestion des technologies de santé (Antilles anglophones)***
National Institute of Higher Education Research Science and Technology, Trinité; Ministry of Health, Jamaïque. Encourager une réglementation appropriée des services médicaux et établir une série de systèmes d'information inter-reliés pour la planification, la sélection, l'achat, l'utilisation et la maintenance de technologies pour les services de soins primaires de santé à Trinité-et-Tobago. 132 550 \$ — 24 mois.
- 90-0211 Aptitudes à l'évaluation et à la gestion des soins de santé (Canada) — Phase IV**
Université de Toronto, Ontario. Permettre à la Faculté de médecine de l'université de financer la participation de huit personnes de pays moins développés au cours «Health Care Evaluation and Management Skills» et d'étudier la faisabilité de réaliser ce cours dans un pays moins développé et de choisir un lieu. 173 568 \$ — 12 mois.
- 90-0217 CIMDER (Colombie) — Phase III***
Centro de Investigaciones Multidisciplinarias en Desarrollo Rural, Cail. Accroître la capacité du CIMDER de faire de la recherche communautaire en association avec les collectivités, les universités et le gouvernement. 360 000 \$ — 48 mois.
- 90-0204 Comprendre le comportement sexuel à risque élevé (Ouganda)***
Makerere University, Kampala. Permettre à l'unité d'épidémiologie clinique de l'école de médecine de Makerere de comprendre le comportement sexuel d'un échantillon de 60 personnes reconnues comme présentant un risque élevé de transmission du virus d'immunodéficience humaine (VIH) au centre commercial, Lyantonde. 83 445 \$ — 18 mois.
- 90-0206 Gestion des technologies de santé (Antilles anglophones)***
National Institute of Higher Education Research Science and Technology, Trinité; Ministry of Health, Jamaïque. Encourager une réglementation appropriée des services médicaux et établir une série de systèmes d'information inter-reliés pour la planification, la sélection, l'achat, l'utilisation et la maintenance de technologies pour les services de soins primaires de santé à Trinité-et-Tobago. 132 550 \$ — 24 mois.
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- 90-0217 CIMDER (Colombie) — Phase III***
Centro de Investigaciones Multidisciplinarias en Desarrollo Rural, Cail. Accroître la capacité du CIMDER de faire de la recherche communautaire en association avec les collectivités, les universités et le gouvernement. 360 000 \$ — 48 mois.
- 90-0219 Troubles associés à la carence en iode (Ghana)**
University of Ghana, Accra. Permettre au Département de nutrition et des sciences de l'alimentation d'établir la prévalence et l'étiologie des troubles associés à la carence en iode dans certaines collectivités, les universités et le communautaire en association avec CIMDER de faire de la recherche Rural, Cail. Accroître la capacité du CIMDER de faire de la recherche Multidisciplinaires en Desarrollo Centro de Investigaciones Phase III*

- Coopération with Developing Countries d'organiser et d'administrer un «groupe de travail sur la recherche en santé au service du développement» de deux ans pour promouvoir l'idée de la recherche essentielle en santé nationale (RESN) de sorte que les pays pourront planifier leur programme de RESN et élaborer leur proposition d'implantation à plus long terme des recommandations de la Commission sur la recherche en santé pour les pays en développement. 300 000 \$ — 24 mois.
- 90-0100 Contrôle de la qualité de l'eau (Brésil-Chili) — Phase II**
Universidade de São Paulo, Brésil, et l'Universidad de Chile, Santiago. Perfectionner les tests Coliphages et H₂S d'analyse microbiologique de la qualité de l'eau; et évaluer la faisabilité économique et technique d'intégrer ces deux tests aux activités des organismes de contrôle de la qualité de l'eau au Brésil et au Chili. 141 910 \$ — 24 mois.
- 90-0101 Pneumopathies professionnelles (Indonésie)**
Bureau régional du Département de la main-d'œuvre, Bandung. Etablir la prévalence des pneumoconioses et d'autres maladies respiratoires chez les travailleurs de l'industrie de la taille de la pierre en fonction de leur exposition aux poussières de pierre, et mettre en place une base concrète pour l'adoption de mesures médicales et environnementales de prévention de ces maladies professionnelles. 95 580 \$ — 12 mois.
- 90-0113 Attitudes et comportements sexuels des adolescents (République dominicaine)**
Instituto de Sexualidad Humana, Santo Domingo. Recueillir des informations complètes sur les motivations et le processus décisionnel en matière de sexualité des adolescents. 67 597 \$ — 18 mois.
- 90-0131 VIH et réfugiés (Afrique du Sud)**
Health and Refugee Trust in South Africa, Royaume-Uni. Élaborer une campagne d'éducation sanitaire axée sur la prévention de la transmission du VIH (virus d'immunodéficience humaine) parmi les réfugiés d'Afrique du Sud en Ouganda, en Tanzanie et en Zambie, et établir des liens avec des organismes progressifs
- d'Afrique du Sud qui font des recherches sur le SIDA (syndrome d'immunodéficience acquise). 201 450 \$ — 24 mois.
- 90-0132 Nutrition appliquée (Kenya) — Phase III**
Université de Nairobi, Kenya. Permettre au Département de technologie alimentaire et de nutrition d'améliorer la formation en nutrition et d'élaborer des politiques de nutrition en Afrique de l'Est en offrant à l'université (d'abord) des installations de formation en nutrition appliquée et en les améliorant. 420 000 \$ — 36 mois.
- 90-0142 Immunisation contre l'hépatite B chez les nourrissons (Égypte)**
Université Menoufia. Permettre à l'Institut du foie de tester et de comparer l'efficacité d'un vaccin anti-hépatite B recombinant l'acide désoxyribonucléique chez les nourrissons vivant dans des collectivités égyptiennes ayant les mêmes caractéristiques socio-économiques, certaines étant touchées par des infections endémiques au *Schistosoma mansoni* et d'autres pas. 214 752 \$ — 36 mois.
- 90-0149 Lutte contre la tuberculose (Inde)**
Foundation for Research in Community Health, Bombay. Étudier les contraintes sociales et opérationnelles et définir des interventions pour renforcer la lutte contre la tuberculose parmi les populations rurales et urbaines de l'État de Maharashtra. 198 040 \$ — 36 mois.
- 90-0153 Épuraton des eaux usées urbaines domestiques (Sénégal)**
Université Cheikh Anta Diop, Dakar. Permettre à l'Institut des sciences de l'environnement de faire une étude de faisabilité de l'épuration des eaux usées domestiques par hydrosère reconstituée. 13 703 \$ — 8 mois.
- 90-0161 Évaluation des besoins de formation en santé publique (Antilles) — Phase II**
University of the West Indies, Jamaïque. Permettre au Département de médecine sociale et préventive, Faculté des sciences de la santé, de déterminer les besoins en matière de formation en santé publique dans la région, tant dans le secteur public que
- dans le secteur privé. 51 430 \$ — 12 mois.
- 90-0174 Diagnostic intégré de l'hépatite B (Global)**
PATH Foundation of Canada, Ontario. Permettre au Program for Appropriate Technology in Health, États-Unis, de mettre au point et de diffuser un moyen simple, rapide et à coût abordable de diagnostiquer l'hépatite B dans le sang, le plasma ou le sérum humains. 174 690 \$ — 18 mois.
- 90-0175 Conception et évaluation d'un système intégré de gestion de l'information (Égypte) — Phase II**
Société palestinienne du Croissant-Rouge, Le Caire. Mettre sur pied un système de gestion de l'information à l'appui de la recherche, de la prise de décisions et de la planification, en vue d'améliorer l'efficacité et l'efficacité de ses services de santé. 239 570 \$ — 18 mois.
- 90-0182 Irrigation des régions rizicoles et santé (Nigéria*)**
Université Obafemi Awolowo, Ile-Ife. Permettre à l'Institut d'écologie de déterminer l'impact sur la santé du projet d'irrigation Lower Anambra sur le secteur visé et les environs, en vue de faire des recommandations appropriées pour contre les effets négatifs s'il y a lieu. 97 860 \$ — 36 mois.
- 90-0188 Étude des diarrhées chez l'enfant de 0 à 4 ans (Bénin*)**
Centre national hospitalier universitaire, Cotonou. Estimer l'incidence des diarrhées chez les enfants de 0 à 4 ans dans la commune urbaine de Gbégaméy, district urbain de Cotonou IV, et identifier les facteurs de risques sensibles à l'action d'éducation pour la santé, particulièrement les croyances socio-culturelles, les connaissances et comportements des parents relatifs à la prévention et au traitement des diarrhées. 16 163 \$ — 9 mois.
- 90-0189 Caractéristiques de la ménopause dans certaines régions urbaines et rurales du Cameroun***
Ministère de l'Éducation supérieure et de la Recherche technique, Permettre à l'Institut de recherche médicale, en collaboration avec le Centre hospitalier universitaire de Yaoundé, de

Sciences de la santé⁸

- 90-0006 Autre mode de finance-
ment des services sanitaires dans
les collectivités urbaines pauvres
(Philippines)
Asia Meridian Management Corpora-
tion, Manille. Évaluer et établir des
lignes directrices appropriées et
pertinentes en matière d'utilisation
des ressources communautaires pour
le financement des services de santé
dans les collectivités urbaines
pauvres du Manille métropolitain.
67 616 \$ — 12 mois.
- 90-0026 Trousse de détection de
coliphages (Malaisie) — Phase II
Universiti Malaya, Kuala Lumpur.
Tester sur le terrain le prototype II de
la trousse de détection de coliphages,
notamment à des fins de production
de masse, à l'intention du personnel
des services environnementaux et des
services de santé chargé de la
surveillance de la qualité de l'eau
dans les pays en développement.
166 310 \$ — 36 mois.
- 90-0031 Disponibilité, qualité et
utilisation de l'eau dans la
municipalité rurale de Samana
(Colombie)
Fundación para el Desarrollo de la
Comunidad, Samana. Permettre au
service des eaux thermales de cette
municipalité rurale de décrire l'état
de ses sources d'eau en termes de
disponibilité, de qualité et
d'utilisation. 61 279 \$ — 12 mois.
- 90-0032 Intoxication due aux
pesticides (Égypte) — Phase II
Université du Caire. Étudier la nature
et l'ampleur de l'exposition aux
pesticides parmi les ouvriers dans la
culture du coton, aux fins de
l'adoption de meilleures mesures de
protection de la santé telles que
normes, lignes directrices, procédures
améliorées et matériel didactique.
197 590 \$ — 36 mois.
- 90-0034 Centres régionaux de
vaccinologie (Amérique latine)
Panamerican Health Organization
(PAHO), États-Unis. Permettre à la
Fundación Mexicana para la Salud de
faire une étude de faisabilité de la
mise sur pied d'un système régional
8. Les projets subventionnés conjointement
avec une autre division paraissent sous le
titre «Projets multidivisionnaires».

- 90-0056 Directives éthiques
internationales pour la recherche
épidémiologique (Global)
Conseil des organisations interna-
tionales des sciences médicales,
Suisse. Établir des lignes directrices
pour l'élaboration de pratiques
acceptables en matière de recherche
épidémiologique de même que pour
la revue des aspects éthiques des
travaux. 58 725 \$ — 18 mois.
- 90-0057 Efficacité des
programmes de santé maternelle et
infantile (Afrique*)
Ministry of Health, Botswana.
Permettre au Health Research Unit de
diffuser de l'information dont se
serviront les gestionnaires et les
décideurs pour améliorer l'accessi-
bilité, la qualité et la rentabilité des
services actuels de soins périnataux et
pour concevoir de futurs programmes
communautaires au Botswana et
ailleurs en Afrique. 74 300 \$ —
12 mois.
- 90-0067 Profils de travail féminin,
stratégies de survie et santé des
femmes (Équateur)
Centro de Estudios y Asesoría en
Salud, Quito. Analyser, au moyen
d'une recherche participative, les
conditions de santé des femmes
actives dans différentes régions
socio-économiques de l'Équateur,
afin de pouvoir formuler des
recommandations en matière de
politique de santé et de former les
groupes de femmes ayant participé à
la recherche. 115 869 \$ — 24 mois.
- 90-0078 Lutte contre la
neurocysticercose (Mexique)
Ministerio de la Salud, México.
Évaluer les connaissances en hygiène
de trois collectivités rurales
mexicaines et leur administrer un
ténicide pour réduire l'incidence
d'infections dues à *Taenia solium*.
267 830 \$ — 30 mois.
- 90-0080 Participation des
travailleurs (Zimbabwe)
Congrès des syndicats du Zimbabwe,
Harare. Déterminer l'ampleur
d'importants dangers pour la santé au
travail dans certaines industries du
Zimbabwe, le rôle que les travailleurs
peuvent jouer pour évaluer objective-
ment ces dangers, la nature et le
fonctionnement des structures de

- santé et d'hygiène en milieu de
travail (y compris les connaissances
et perceptions des travailleurs) et les
obstacles à l'adoption de mesures
pour corriger les dangers définis.
209 421 \$ — 36 mois.
- 90-0081 Lutte contre la
leishmaniose andine (Pérou) —
Phase II
Universidad Peruana Cayetano
Heredia, Lima. Permettre à l'Instituto
de Medicina Tropical «Alexander
Von Humboldt» de mettre au point
une bonne stratégie de lutte contre la
leishmaniose andine dans les vallées
de Huayllacallan et de Santa Eulalia.
205 160 \$ — 36 mois.
- 90-0082 Environnement et survie
infantile (Bangladesh)
Centre international de recherche sur
les maladies diarrhéiques, Dhaka.
Déterminer l'association entre les
facteurs environnementaux,
comportementaux et socioculturels et
la mortalité chez les enfants de 1 à
59 mois et élaborer les directives à
appliquer aux interventions faites
pour réduire cette mortalité.
191 210 \$ — 36 mois.
- 90-0083 Recherche communau-
taire sur la santé mentale (Inde)
Schizophrenia Research Foundation,
Madras. Élaborer et évaluer un
prototypage de système communautaire
de soins de santé mentale dans un
secteur rural. 78 360 \$ — 36 mois.
- 90-0093 Praticiens de la santé
communautaire (Corée)
Yonsei University, Seoul. Permettre
d'améliorer la participation
communautaire à la création de
services de soins primaires.
103 970 \$ — 24 mois.
- 90-0098 Recherche nationale
essentielle dans le domaine de la
santé (Mexique)
Secretaría de Salud, México, DF.
Permettre au Directeurat de
l'épidémiologie de mettre au point un
plan national de recherche essentielle
en santé. 63 765 \$ — 18 mois.
- 90-0099 Commission Inter-
nationale sur la recherche en santé
(Global) — Phase II
Division des sciences de la santé,
CRDI. Permettre au CRDI et à la
Swedish Agency for Research

- 90-0323 Le buffle comme animal de trait (Thaïlande) — Phase II***
Université Kasetsart, Bangkok. Permettre au département de zootechnie d'évaluer le rôle et l'importance de l'animal de trait sur les petites exploitations agricoles et lui fournir les possibilités d'accroître ce bétail par le biais d'une gestion et d'une alimentation améliorées. 214 660 \$ — 36 mois.
- 90-0342 Collection de plasmas germinatif de plantes-racines (Vietnam)***
Centre vietnamien de recherche sur la pomme de terre et les cultures maracathères, Hanoi. Permettre la constitution d'une collection vivante de plasmas germinatif de la patate douce, du manioc, du taro et du balisier aux termes du Programme national de plantes-racines, qui prévoit des activités de collection, de caractérisation, de documentation ainsi que d'évaluation des variétés et établir, de concert avec les exploitants agricoles, les priorités et les objectifs de culture. 203 960 \$ — 36 mois.
- 90-0344 Systèmes amazoniens de production agricole (Brésil)***
Empresa Brasileira de Pesquisa Agropecuária et le Núcleo de Monitoramento Ambiental, Brasília. Améliorer le bien-être familial des petits exploitants et colons de la région amazonienne de Machadinho, Rondonia, grâce au transfert des technologies de production agricole les plus efficaces et durables, tout en contribuant à réduire les répercussions écologiques sur la forêt tropicale humide des basses terres. 73 000 \$ — 48 mois.
- 90-0345 Évaluation de l'adoption de la technologie (Paraguay)**
Centro de Estudios Rurales de Itapua, Asunción. Déterminer les facteurs qui, à la ferme et à l'extérieur, exercent une influence sur l'adoption de la technologie proposée aux petits producteurs de la région située au nord-est d'Itapua. 71 500 \$ — 24 mois.
- 90-0347 Recherche légumière et développement (Tanzanie)***
Ministère de l'agriculture et de l'élevage, Dar es-Salaam. Permettre à HORTI-Tengeru d'accroître la production et l'utilisation des légumes en Tanzanie. 55 668 \$ — 24 mois
- 90-0348 Bambou (Thaïlande) — Phase III**
Roya! Forest Department et l'Université Kasetsart, Bangkok. Gérer les ressources thaïlandaises en bambou sur une base durable et au plus grand avantage économique de la population. 146 310 \$ — 24 mois.
- 90-0353 Flore (Sénégal)**
Ministère du développement rural et de l'hydraulique, Dakar. Permettre à l'Institut sénégalais de recherche agricole de compléter l'étude et la documentation sur la flore du Sénégal, en assurant la formation spécialisée d'un botaniste sénégalais qui sera chargé du suivi de l'étude. 42 990 \$ — 36 mois.
- 90-1015 Gestion de la recherche et économie des ressources (Zimbabwe—Canada)**
Université du Zimbabwe, Harare. Renforcer les capacités de son Département d'économie et de vulgarisation agricoles en gestion de la recherche et en économie des ressources en y affectant, pendant un an, un professeur du Département d'économie agricole et de la gestion des exploitations de l'Université du Manitoba. 30 000 \$ — 12 mois.
- 90-1016 Amélioration de *Lathyrus* (Pakistan—Canada)***
Pakistan Agricultural Research Council, Islamabad, et Agriculture Canada, Ottawa. Créer des variétés de *Lathyrus sativus* sans neurotoxines ou n'en ayant que très peu, à haut rendement pour l'alimentation humaine et animale, ayant une bonne capacité de fixation de l'azote, n'exigeant que peu d'intrants et adaptées aux systèmes culturaux et aux conditions économiques des petites exploitations agricoles du Pakistan. 274 100 \$ — 36 mois.
- 90-1018 Disponibilité du phosphore (Brésil—Ghana—Canada) — Phase II**
Universidade Federal de Pernambuco, Université du Ghana, Accra, et l'Université de la Saskatchewan, Saskatoon. Recommander des pratiques culturales et d'alimentation des sols qui amélioreraient la fertilité des sols qui amélioreraient la fertilité des sols attribuable au phosphore et la conservation des matières organiques dans les savanes africaines et latino-américaines où se pratique une agriculture durable à faibles intrants. 280 500 \$ — 36 mois.
- 90-1029 Résistance horizontale de la fève (Mexique—Canada)**
Colegio de Postgraduados, Mexique, et l'Université de Guelph. Étudier la possibilité de favoriser une résistance horizontale complète de la fève aux maladies et aux ennemis des cultures au Mexique. 185 910 \$ — 36 mois.
- 90-1033 Virus de jaunisse nanisante (ICARDA—Chili—Canada) — Phase IV***
Centre international de recherche agricole dans les zones arides, Syrie, l'Instituto de Investigaciones Agropecuarias, Chili, et l'Université Laval, Québec. Assurer que les pays en développement participeront aux travaux de création de lignées de céréales résistantes au virus de la jaunisse nanisante, à la sécheresse et aux maladies, et en profiteront. 340 700 \$ — 48 mois.
- 90-1036 Industrie de transformation des fruits (Antilles—Canada)***
Caribbean Industrial Research Institute, Trinité-et-Tobago, et le Conseil de recherche et de productivité, Nouveau-Brunswick. Élaborer et mettre à l'essai les méthodologies favorables à l'établissement de nouvelles entreprises de transformation des fruits dans les collectivités pauvres des Antilles. 194 600 \$ — 36 mois.
- 90-1040 Agroforesterie durable (Ghana—Philippines—Canada)***
Université de Brandon, Manitoba. Permettre au Ghana Rural Reconstruction Movement, Mampong-Akwapi, et à l'International Institute of Rural Reconstruction, Cavite, d'améliorer les conditions socio-économiques et le milieu de vie des petites exploitations familiales de la vallée de Mampong en les introduisant à l'agroforesterie. 245 500 \$ — 36 mois.

- 90-0198 Bambou (Inde) — Phase II**
Kerala Forest Research Institute, Peechi. Évaluer les ressources en bambou du sud de l'Inde en utilisant des méthodes modernes de faire l'inventaire des ressources forestières et de mettre au point des méthodes d'amélioration de sa production et de son potentiel d'utilisation. 156 560 \$ — 36 mois.
- 90-0199 Rotin (Inde) — Phase II**
Kerala Forest Research Institute, Peechi. Déterminer les moyens d'accroître la production et d'accroître le revenu des revenus pour les ruraux. 158 220 \$ — 36 mois.
- 90-0207 Cultures en montagne (Népal) — Phase II***
National Agricultural Research Center, Kamanadon. Permettre au National Hill Crop Research Program d'entreprendre un projet de création d'une technologie propre aux cultures en montagne, avec application aux terres arides et aux systèmes agri-coles peu coûteux, afin d'augmenter la productivité et la durabilité des systèmes de culture en montagne et aider à répondre aux besoins des montagnards. 322 235 \$ — 48 mois.
- 90-0212 Sources d'aliments/sous produits des animaux d'élevage (Kenya)**
Université de Nairobi. Permettre au Département de production animale de mettre au point d'autres sources locales d'aliments pour les porcs et la volaille élevés par de petits producteurs. 205 900 \$ — 36 mois.
- 90-0224 Production et utilisation du millet (Kenya)**
Université de Nairobi. Mieux comprendre les divers aspects de la production et de l'utilisation du millet au Kenya afin de définir le programme de recherche et de développement qui visera à accroître la part du système national de production de céréales et d'aliments qui revient aux mils. 33 660 \$ — 12 mois.
- 90-0238 Alimentation des chèvres et des moutons (Inde) — Phase II***
Pradesh, Haidarabad. Permettre aux Collèges universitaires de médecine vétérinaire situés à Haidarabad et à Tirupati de développer et de faire connaître des systèmes d'alimentation intensive des ovins.
- 90-0245 Coordonnateur régional dans le domaine de la foresterie (Asie)**
Division des sciences de l'agriculture, de l'alimentation et de la nutrition, CRDI. Fournir un soutien technique et administratif aux projets en foresterie financés par le CRDI en Asie du Sud au moyen d'un coordonnateur régional en foresterie. 30 000 \$ — 6 mois.
- 90-0246 Conservation de la viande (Philippines)**
University of the Philippines à Los Baños, Laguna. Permettre à l'Institut of Animal Science de l'université, en collaboration avec les Facultés of Food and Sciences and Agricultural Economics, de mettre au point et mettre à l'essai des techniques pour réduire les pertes de viande durant le transport et l'étalage et d'ainsi réduire les risques pour la santé attribuables à la contamination de la viande au moment de la vente. 141 650 \$ — 36 mois.
- 90-0247 Essai du décorqueur (Niger) — Phase II**
Institut pour l'étude et l'application du développement, Niamey. Adapter le décorqueur MINI-CRS (Catholic Relief Services) pour qu'il puisse être fabriqué et utilisé au Niger et mettre à l'épreuve et déterminer l'impact du décorqueur modifié. 96 153 \$ — 24 mois.
- 90-0256 Mise au point de décorqueurs (Sénégal) — Phase II***
Institut sénégalais de recherches agricoles et Société industrielle sahélienne de mécaniques, de matériels agricoles et de représentations, Dakar. Répandre l'utilisation du décorqueur MINI-CIS et en favoriser l'emploi de façon durable, en tenant compte des conditions techniques, culturelles, sociales et économiques qui prévalent dans le pays. 286 367 \$ — 36 mois.
- 90-0259 Élevage du porc local (Congo)***
Direction générale de la recherche scientifique et technique, Brazzaville. Permettre au Centre de recherches vétérinaires et zootechniques d'assurer l'auto-suffisance alimentaire, notamment en protéines
- 90-0267 Décorqueur des grains (Malawi) — Phase II***
Ministère de l'Agriculture, Lilongwe. Permettre au Département de recherche agricole d'examiner l'impact de quatre installations pilotes de décorqueurs abrasifs à sec et d'introduire le décorqueur dans la région nord du pays. 159 500 \$ — 36 mois.
- 90-0275 Entreposage en vrac du grain (Thaïlande)***
Département d'agriculture, Bangkok. Permettre au Agricultural Engineering Division de mettre au point la technologie et arrêter les directives à appliquer à l'entreposage en vrac du paddy et du maïs qui conviendraient aux petites exploitations agricoles en milieu tropical chaud et humide. 148 620 \$ — 36 mois.
- 90-0285 Bambou/rotin (Asie du Sud-Est)**
Fondation PROSEA (Plant Resources of South East Asia), Indonésie. Diffuser les connaissances sur le bambou et le rotin auprès des usagers actuels et éventuels en produisant une édition à prix abordable d'un manuel de deux volumes et une base de données sur le bambou et le rotin. 40 000 \$ — 24 mois.
- 90-0292 Ichtyo-génétique (Asie du Sud-Est) — Phase II**
Southeast Asian Fisheries Development Center, Philippines. Mettre au point et appliquer à l'aquaculture artisanale asiatique des méthodes d'amélioration du rendement des poissons d'élevage. 102 620 \$ — 36 mois.
- 90-0294 Initiatives d'ONG (Côte d'Ivoire)***
Centre de formation et de recherches en animation rurale, Abidjan. Obtenir une connaissance approfondie des ONG et des organisations locales de développement participatif oeuvrant en milieu rural que péturbain, afin de tirer des enseignements de l'expérience de ces structures, de renforcer ces dernières et de consolider leur action. 88 057 \$ — 24 mois.

- 90-0140 Développement des pêches indigènes (République démocratique populaire lao)**
Ministère de l'Agriculture et des Forêts, Vientiane. Permettre au Département de l'élevage et de la médecine vétérinaire de renforcer les capacités de la Division des pêches et des services provinciaux associés d'agriculture et de foresterie, à l'appui de la gestion rationnelle des pêches et de l'aquaculture dans le Mékong. 249 700 \$ — 24 mois.
- 90-0148 Centre de distribution de graines agroforestières (Philippines) — Phase II**
University of the Philippines à Los Baños, Laguna. Permettre à son département d'agronomie de faciliter l'échange d'information sur les sources de semences et la technologie entre les organisations et les individus oeuvrant en agroforesterie. 113 570 \$ — 36 mois.
- 90-0159 Amélioration de la production du plantain (Colombie) — Phase II***
Instituto Colombiano Agropecuario, Bogotá. Accroître et stabiliser la productivité de la culture du plantain dans des zones choisies de la Colombie en assurant le transfert des technologies appropriées mises au point en phase I et en élaborant et en transférant de nouvelles technologies. 224 300 \$ — 36 mois.
- 90-0160 Production et transfert-matton du quinoa (Équateur)***
Instituto Nacional de Investigaciones Agropecuarias (INIAP), Quito. Étudier les systèmes de production, de transformation et de commercialisation des céréales andines et appliquer les technologies mises au point par l'INIAP dans une région pilote des Andes équatoriennes. 450 500 \$ — 48 mois.
- 90-0166 Analyse de la situation des pêches (Uruguay)**
Centro Cooperativista Uruguayo, Montevideo. Analyser la situation et les tendances du développement des pêches en Uruguay, en particulier le sous-secteur de la pêche à petite échelle, en vue de l'adoption d'un plan d'action pour l'avenir. 27 000 \$ — 9 mois.
- 90-0168 Réseau sur le développement côtier intégré (Amérique latine) — Phase II**
Centro Peruano de Estudios para el Ecodesarrollo Marino, Lima. Assurer la coordination régionale et appuyer la recherche et les activités de développement prônées par les projets de pêches artisanales et les organismes résidant principalement au Brésil, au Chili, en Colombie et au Pérou, dans le cadre du réseau de développement côtier intégré. 240 000 \$ — 24 mois.
- 90-0169 Communications dans le milieu des pêches (Chili)**
Consejo Nacional de Pescadores Artesanales de Chile (CONAPACH), Valparaíso. Permettre au Centro de Educación, Desarrollo e Investigación de la Pesca Artesanal de Chile de participer à l'établissement, au CONAPACH, d'une politique de communications faisant appel aux publications existantes afin de fournir de l'information, du matériel didactique et des conseils aux pêcheurs artisanaux associés. 48 000 \$ — 12 mois.
- 90-0172 Culture tissulaire appliquée aux essences forestières (Colombie) — Phase II**
Pontificia Universidad Javeriana, Bogotá. Permettre au Département de biologie d'accroître la productivité des programmes colombiens de reboisement en faisant appel à des techniques de culture tissulaire pour la propagation de masses de génotypes supérieurs d'essences forestières choisies et leur amélioration génétique. 98 000 \$ — 36 mois.
- 90-0179 Développement des zones de montagnes (Algérie)***
Ministère de l'Agriculture, Alger. Permettre à l'Institut national de la recherche forestière d'augmenter la production agricole par la relance de l'économie des régions montagneuses au moyen de plans d'aménagement intégrés et de projets de développement centrés sur les Bassins Versants. 197 600 \$ — 36 mois.
- 90-0180 3^e Cycle en économie rurale au CIREs (Côte d'Ivoire)**
Winrock International Institute, États-Unis. Permettre au Centre social d'augmenter ses compétences en recherche et en supervision de
- 90-0183 Ostréiculture (Soudan) — Phase III***
Société de recherche agricole, Port Soudan. Établir et évaluer des installations productives et commerciales de nacre sur la Mer Rouge et en appuyer la production par une infrastructure gouvernementale et une recherche soutenue. 301 430 \$ — 48 mois.
- 90-0184 Arbres fruitiers (Inde)**
Bhagavatula Charitable Trust, Yellamanchili. Mettre au point de meilleures technologies pour l'intégration d'arbres fruitiers indigènes aux systèmes d'exploitation agricole des hautes terres et des terres en friche de l'Inde, améliorer la nutrition et créer une autre source de revenu et d'emploi. 250 000 \$ — 48 mois.
- 90-0185 Réseau africain sur les provenances**
Centre international de l'élevage pour l'Afrique, Éthiopie. Appuyer le réseau africain sur les provenances pour accroître la capacité des scientifiques et des établissements nationaux en recherche agricole de faire de la recherche sur les fourrages, les déchets de récolte et les sous-produits agroindustriels comme base à la création de meilleurs systèmes durables de production animale. 817 280 \$ — 48 mois.
- 90-0186 Réseau de recherche sur les graines oléagineuses (Global) — Phase IV**
Institute of Agricultural Research, Éthiopie. Aider les programmes de recherche nationaux sur les oléagineux à améliorer la nutrition, l'emploi et les revenus des petits producteurs d'oléagineux dans leur pays. 373 000 \$ — 18 mois.
- 90-0190 Amélioration de l'eucalyptus (Chili) — Phase II**
Instituto Forestal, Santiago. Accroître la productivité des plantations forestières dans la région semi-aride du centre du Chili grâce à l'amélioration génétique d'espèces d'eucalyptus choisies en fonction des résultats des recherches précédentes. 135 600 \$ — 36 mois.

- 90-0091 Pétioncles (Pérou) — Phase II**
Instituto del Mar del Perú, Callao. Améliorer les systèmes d'élevage de pétoncles qui conviendraient aux collectivités côtières à faible revenu. 266 700 \$ — 24 mois.
- 90-0102 Capacité de recherche sur les oléagineux (Afrique orientale et australe)***
Agricultural Research Foundation, Kenya. Renforcer la capacité des systèmes de recherche nationaux de définir et de résoudre les problèmes cruciaux qui limitent la performance du secteur des huiles/protéines végétales dans deux pays d'Afrique orientale et australe. 424 194 \$ — 24 mois.
- 90-0105 Sols acides (Nigeria)***
Université Obafemi Awolowo, Ile-Ife. Elaborer des techniques de gestion des sols environnementalement et économiquement viables pour les petits agriculteurs, pour remplacer les techniques actuelles de culture par rotation et ainsi favoriser la production durable et améliorer la qualité des sols. 146 464 \$ — 36 mois.
- 90-0106 Tubercules alimentaires (Ouganda) — Phase II***
Ministère de l'agriculture et de la foresterie, Entebbe. Permettre à la Station de mettre au point de meilleures variétés et méthodes culturales du manioc et de la patate douce, qui seront bien accueillies par les producteurs et les consommateurs. 247 760 \$ — 36 mois.
- 90-0107 Industrie de l'ail (Philippines)**
Mariano Marcos State University, Batang. Elaborer des techniques de production et de transformation de l'ail et un système de commercialisation dans la province d'Ilocos Norte, de façon à stabiliser et à maximiser la profitabilité de la production d'ail à petite échelle. 163 260 \$ — 36 mois.
- 90-0115 Action phytosanitaire planifiée (Afrique orientale et australe) — Phase II**
Institut international pour la lutte biologique, Royaume-Uni. Permettre à sa station du Kenya d'aider les pays dans la région à mettre au point des programmes de recherche efficaces
- 90-0089 Plantes-racines (Indonésie) — Phase II**
Malang Research Institute for Food Crops, Malang, en collaboration avec l'Université de Bravijaya. Elaborer et consolider des méthodes appropriées et durables de production, de transformation et de commercialisation des plantes-racines dans les zones agricoles prioritaires de l'Indonésie. 229 610 \$ — 36 mois.
- 90-0083 Symptômes racinaires (Maroc) — Phase II***
Ministère de l'Agriculture et de la Réforme agraire, Rabat. Permettre à la Division des recherches et expérimentations forestières d'augmenter la productivité des plantations résineuses en pépinière qui des eucalyptus en première qui résistent des plants à la sécheresse et aux maladies. 144 500 \$ — 36 mois.
- 90-0071 Sésame (Kenya)**
Université Egerton, Njoro. Aider les producteurs de sésame à accroître leur production tant pour consommation domestique que pour commercialisation, et ainsi améliorer la nutrition de leur famille et leur revenu. 49 280 \$ — 24 mois.
- 90-0072 Système du piedmont de l'Amazonie (Pérou) — Phase II**
Instituto Nacional de Investigación Agraria y Agroindustrial, Lima. Mettre au point des systèmes agroforestiers soutenables et économiques dans le piedmont de l'Amazonie péruvienne et fournir le bois nécessaire à l'emballage des fruits produits localement. 51 300 \$ — 24 mois.
- 90-0076 Péjibaie et aracées (Costa Rica) — Phase II**
Universidad de Costa Rica, San José. Permettre à son Centro de Investigaciones Agroómicas de créer des cultivars améliorés de péjibaie et de consolider un programme national de graines d'aracées certifiées (*Xanthosoma* sp., *Colocasia* sp. et *Dioscorea* sp.). 316 440 \$ — 48 mois.
- 90-0089 Plantes-racines (Indonésie) — Phase II**
Malang Research Institute for Food Crops, Malang, en collaboration avec l'Université de Bravijaya. Elaborer et consolider des méthodes appropriées et durables de production, de transformation et de commercialisation des plantes-racines dans les zones agricoles prioritaires de l'Indonésie. 229 610 \$ — 36 mois.
- 90-0117 Diversification de l'économie rurale (Sri Lanka)**
Ministère de l'Agriculture, Paradeniya. Évaluer les contributions relatives de l'emploi hors ferme et du travail agricole lorsqu'il s'agit d'accroître les possibilités d'emploi et de revenu des populations rurales. 57 870 \$ — 24 mois.
- 90-0119 Arbres fruitiers (Zimbabwe)**
Environnement and Development Activities—Zimbabwe, Harare. Déterminer le rôle global des arbres fruitiers indigènes sur les terres communales du Zimbabwe du point de vue de leur importance socio-économique, et intégrer les avantages aux systèmes de production agro-pastorale existants. 24 500 \$ — 6 mois.
- 90-0122 Régénération des forêts (Chili) — Phase III**
Instituto Forestal, Santiago. Mettre au point des techniques sylvicoles appropriées pour la régénération et la gestion des forêts primaires déboisées de la région semi-aride du centre du Chili, et fournir du soutien technique à d'autres projets de recherche en reboisement du CRDI en Amérique latine. 244 700 \$ — 36 mois.
- 90-0126 Sous-secteur du sorgho et du millet (Tanzanie)**
Université d'Agriculture Sokoto, Morogoro. Permettre au Département d'économie rurale d'élaborer une stratégie nationale pour le sous-secteur du sorgho et du millet de ce pays, en vue de promouvoir la production, le marketing et l'utilisation efficaces de ces récoltes. 197 400 \$ — 24 mois.
- 90-0137 Analyse du processus décisionnel (Pérou)**
Centro de Estudios y de Desarrollo Agrario del Perú, Lima. Analyser le processus décisionnel des petits agriculteurs et élaborer et mettre à l'essai des méthodes permettant aux chercheurs sur le terrain de prendre ce processus en considération dans la mise au point et le transfert de technologies de recherche. 132 000 \$ — 24 mois.

systèmes agricoles des petites exploitations dans le bassin de l'Amazonie péruvienne. 392 850 \$ — 36 mois.

90-0033 Adoption de technologies (Amrique latine)
Corporación de Investigación Latinoamericana para el Desarrollo del Sector Rural y Costero, Colombia. Etablir des priorités de recherche, des cadres analytiques et des méthodes pour l'évaluation de l'introduction de technologies en Amérique latine, en vue de coordonner les activités de recherche et de tester les stratégies de transferts par le biais d'un réseau sur l'introduction de technologies. 83 300 \$ — 12 mois.

90-0035 Sylviculture (Togo)
Office de développement et d'exploitation des forêts, Lomé. Assurer une gestion rationnelle, selon des normes sylvicoles précises, des plantations actuelles et à venir, faites avec trois espèces à croissance rapide. 121 500 \$ — 36 mois.

90-0036 Plasma germinatif du bambou (Indonésie)
National Committee for Germplasm Conservation, Bogor. Dresser un répertoire exhaustif des espèces de bambou indigènes et conserver leur plasma germinatif au sein de collections vivantes. 74 500 \$ — 36 mois.

90-0046 Conseiller en économie de post-récolte (Asie) — Phase III
SEAMEO Regional Centre for Graduate Study and Research in Agriculture, Philippines. Renforcer les capacités de recherches socio-économiques des scientifiques et économistes spécialisés en post-récolte, pour que les recherches menées dans ce domaine soient techniquement, économiquement et socialement viables, par l'engagement d'un conseiller en économie de post-récolte. 222 940 \$ — 24 mois.

90-0049 Réseau asiatique de riziculture et de pisciculture associées
International Centre for Living Aquatic Resources Management, Philippines, et le Freshwater Aquaculture Centre, Philippines. Poursuivre pendant encore un an les travaux du réseau asiatique de riziculture et de pisciculture, jusqu'à ce qu'un financement à plus long

participants à être mieux en mesure de conduire ou de superviser des travaux de haute qualité sur les femmes ou sur les relations entre les sexes. 59 980 \$ — 12 mois.

90-1043 Bourse à l'intention des jeunes journalistes canadiens
Division des bourses, CRDI. Encourager les journalistes canadiens à traiter des questions d'actualité dans les pays en développement d'une manière plus consciente, plus informée, et avec plus de sensibilité en leur donnant la possibilité d'acquérir une expérience directe du Tiers-Monde avec une agence de presse spécialisée dans le domaine du développement international. 46 000 \$ — 24 mois. COMM-DB.

90-0002 Semences forestières (Burkina Faso) — Phase II

Ministère de l'Environnement et du Tourisme, Ouagadougou. Permettre au Centre national des semences forestières de renforcer ses capacités humaines et techniques et de valoriser ses résultats de recherche acquis tout en poursuivant la production de semences forestières de qualité en vue de répondre aux besoins nationaux et à une partie de ceux de la sous-région. 452 900 \$ — 60 mois.

90-0007 Agroforesterie (Gabon)
Institut de recherche en écologie tropicale, Libreville. Augmenter et diversifier les revenus des paysans grâce à la plantation de quelques pieds d'*Irvingia gabonensis* (arbre fruitier indigène) en association avec les cultures traditionnelles (maïs, igname, manioc). 10 400 \$ — 24 mois.

90-0013 Arbres fruitiers indigènes (Férou) — Phase II
Instituto Nacional de Investigación Agraria y Agroindustrial, Lima. Promouvoir l'intégration de certaines essences d'arbres fruitiers aux

7. Les projets subventionnés conjointement avec une autre division paraissent sous le titre «Projets multidimensionnaires».

Manitoba. Offrir deux cours aux gestionnaires de la recherche de niveau intermédiaire et aux chargés de projet et renforcer les capacités gestionnelles des systèmes nationaux de recherche agricole et du Département d'économie agricole de l'université en matière de cours de gestion agricole et de sujets connexes. 94 200 \$ — 24 mois.

90-1021 Or dans les latérites (Mali-Canada)*
Ministère de l'Industrie, de l'Hydraulique et de l'Énergie, Bamako, et l'École polytechnique de Montréal, Québec. Améliorer l'exploration et l'exploitation de l'or dans les latérites par les opérateurs, principalement au Mali. 432 702 \$ — 60 mois. DB-STC.

90-1032 Coordination du réseau de conchyliculture (Global-Canada) — Phase II
Université Dalhousie, Nouvelle-Écosse. Offrir coordination et soutien aux dix projets du réseau de conchyliculture, tout comme faciliter une bonne interaction entre eux et leur mise en oeuvre efficace. 501 400 \$ — 48 mois. DB-SAN.

90-1034 Systèmes piscicoles intégrés (Chine-Canada) — Phase II*
Ministère de l'Agriculture, de l'Élevage et des Pêches, Chine, en collaboration avec le Centre régional de formation et de recherche sur la pisciculture intégré pour l'Asie et le Pacifique, Chine, le Freshwater Institute et l'Université St Mary's, Nouvelle-Écosse. Etablir les critères scientifiques et économiques à respecter pour réussir la culture du poisson dans des étangs chargés d'engrais en vue de faciliter l'adaptation et l'implantation de la technologie d'exploitation agricole dans des régions à différentes conditions agroclimatiques et socioéconomiques. 574 700 \$ — 48 mois. DB-SAN-SSAN-SSOC.

90-1037 Institut de cours d'été sur le rôle des sexes et le développement (Global-Canada) — Phase III
St Mary's University, Halifax. Organiser un institut de cours d'été d'un mois afin de préparer les

- 90-0280 La réinsertion des migrants de retour au Maroc**
Institut arabe de l'emploi, Tanger.
Fournir les éléments nécessaires à la formulation d'une politique de réinsertion et de réinsertion des migrants de retour. Seront recueillies des données telles que : les facilités d'adaptation des retournants, leurs qualifications, leurs besoins en matière de formation professionnelle, leurs capacités entrepreneuriales et les résistances sociales et culturelles vis-à-vis de leur milieu d'origine.
125 240 \$ — 36 mois. DB-SSOC.
- 90-0283 Migration de retour et développement local en Tunisie***
Ministère du Plan et du Développement régional, Tunis.
Permettre à l'Institut de recherches et d'études sur la population d'étudier l'impact de la migration de retour sur le développement local aux niveaux économique, social et géographique.
95 420 \$ — 36 mois. DB-SSOC.
- 90-0286 Atelier international sur les femmes et le développement (Global) — Phase II**
Université Laval, Canada. Permettre au Laboratoire de recherches anthropologiques, Département d'anthropologie, de financer un atelier international qui a pour but d'assurer une formation aux chercheuses dans le domaine des femmes et du développement.
77 000 \$ — 12 mois.
APS-DB-SSOC.
- 90-0289 Décentralisation du système de libre entreprise (Cuba)***
Centro de Estudios sobre América, Havana. Analyser le processus de décentralisation du système de libre entreprise amorcé récemment à Cuba, en se référant au niveau d'autonomie déjà atteint, et faire des recommandations en vue d'accroître l'autonomie locale et la participation des ouvriers.
40 370 \$ — 15 mois. DB-SSOC.
- 90-0298 Application à haute température**
(Amérique latine)
Fundação Tecnico-Educacional Souza Marques, Rio de Janeiro. Procéder au transfert de la technologie issue des projets *Alliances d'acier industriel*, phases I et II, et promouvoir son exploitation au Brésil, en Colombie et au Mexique.
53 450 \$ — 10 mois. COMM-STG.
- 90-0302 Émigration maghrébine et développement local en Algérie***
Laboratoire «Économies et sociétés dans les pays du Maghreb», Alger. Analyser les causes de l'échec des politiques de réinsertion antérieures et formuler des recommandations susceptibles de faciliter la réinsertion des migrants de retour dans le milieu économique et social et de renforcer leur participation au développement local.
112 300 \$ — 36 mois. DB-SSOC.
- 90-0307 Compétences en économie agricole (Vietnam)**
Institut international de recherche sur le riz, Philippines. Permettre à des organismes universitaires et publics vietnamiens de mieux comprendre les concepts et les méthodes occidentaux d'économie agricole, renforçant ainsi leur capacité d'élaborer des priorités de recherche et d'évaluer l'incidence des technologies et des politiques.
105 320 \$ — 24 mois. DB-SAN.
- 90-0308 Liens entre les ONG et le gouvernement (Philippines)**
Institut international de reconstruction rurale, Cavite. Établir les conditions préalables d'une collaboration fructueuse entre des organisations gouvernementales et des organisations non gouvernementales (ONG) en matière de gestion des richesses naturelles.
40 000 \$ — 9 mois. SAAN-SSOC.
- 90-0312 Trousse autodidacte en recherche participative et recherche-action (Global)**
Divisions des communications et des sciences sociales, CRDI. Réaliser une trousse autodidacte d'initiation à la recherche participative et à la recherche-action comportant des documents imprimés et vidéo diffusés auprès des organisations non gouvernementales, des organismes publics et du personnel universitaire afin d'améliorer leur capacité à faire appel à la recherche participative et axée sur l'action à des fins éducatives et de développement communautaire.
85 160 \$ — 18 mois. COMM-SSOC.
- 90-0324 Les sexes, l'environnement et la technologie (Brésil)***
Instituto de Estudios Económicos, Sociais, e Políticos de São Paulo. Déterminer l'incidence des politiques d'exportation sur les femmes et l'environnement en se référant à trois études de cas, l'une sur l'industrie manufacturière de jeans, une autre sur l'industrie de l'alcool-de-sucre et une troisième à identifier. Le but est d'élaborer de l'information spécifique aux industries en question et de l'information générale sur les effets d'une croissance dictée par les besoins de l'exportation.
135 170 \$ — 18 mois. APS-SSOC.
- 90-0328 Déterminants socio-culturels du SIDA (Zimbabwe)***
Université du Zimbabwe, Harare. Permettre au Département de sociologie d'étudier et d'évaluer des solutions de rechange dans le domaine de l'éducation et du counselling en ce qui a trait au syndrome d'immunodéficience acquise (SIDA). Cinq stratégies différentes seront mises à l'épreuve dans cinq communautés.
118 670 \$ — 12 mois. SSAN-SSOC.
- 90-0341 IV^e atelier latino-américain sur les méthodes de recherche appliquée dans le domaine de la santé (Nicaragua)***
Universidad Nacional Autónoma de Nicaragua, Managua. Permettre au Bureau de planification de la Faculté de médecine de renforcer le potentiel de recherche d'un certain nombre d'organismes de recherche. Le projet contribuera à améliorer la conception et la réalisation des projets de recherche appliquée dans le domaine de la santé, avec la participation de représentants des collectivités locales.
63 160 \$ — 6 mois. DB-SSAN.
- 90-1000 Hydrogéologie — Phase II (Ouganda-Canada)**
Makerere University, Kampala; Ministry of Water and Mineral Development, Kampala; l'Université de Toronto, Ontario. Définir des critères de gestion des ressources hydriques qui seront intégrés à une politique nationale reconnaissant la nature interactive des eaux souterraines et des eaux de surface et basée sur des considérations socio-économiques et démographiques, de façon à assurer l'utilisation durable de ces ressources essentielles.
564 436 \$ — 36 mois.
SSOC-STG.
- 90-1017 Gestion de la recherche (Zimbabwe-Canada)***
Université du Zimbabwe en collaboration avec l'université du

- en développement des systèmes d'alimentation basés sur l'utilisation des résidus de récolte et sous-produits agro-industriels en vue d'améliorer les revenus et les compétences techniques des éleveurs et d'augmenter la production de viande. 197 674 \$ — 36 mois.
- 90-0202 Exploitation des nuages côtiers (Chili)
Corporación Nacional Forestal—Secretaría Regional de Planificación y Coordinación IV Región, Santiago. Formuler et implanter une stratégie de commercialisation comprenant la préparation et la diffusion d'une trousse technologique et d'activités de démonstration détaillées pour promouvoir la technologie reliée à l'exploitation des nuages côtiers et évaluer son potentiel en foresterie. Ces travaux visent les décideurs des pays en développement, les administrations de l'eau et les organisations de financement nationales et internationales. 173 489 \$ — 25 mois.
- 90-0215 Séchoir solaire pour le bois d'oeuvre (Brésil) — Phase II
Fundação Pro-Natureza, Brasília. Permettre à l'Instituto Nacional de Pesquisas da Amazonia de créer un séchoir solaire à bois d'oeuvre à l'intention des petites industries et scieries de l'Amazonie et d'autres régions aux conditions analogues. 135 000 \$ — 24 mois.
- 90-0216 Etude sur la migration interne (Thaïlande)
Mahidol University, Salaya, Nakornchaisri. Permettre à l'Institute for Population and Social Research de lancer une enquête nationale sur la migration pour connaître les caractéristiques des migrants et des non-migrants, les courants, les schémas et les causes de la migration, et la satisfaction et l'adaptation des migrants. 201 950 \$ — 24 mois.
- 90-0218 Toxicologie d'un piscicide botanique (Thaïlande)
Université Chiang Mai. Permettre à la Faculté de médecine de déterminer si l'utilisation du piscicide *Swinop* dans les exploitations aquicoles
- risque d'être dangereuses pour les êtres humains, en appliquant un protocole d'étude de la toxicité chez les mammifères élaboré selon les tests de toxicité des produits chimiques. 113 890 \$ — 24 mois.
- 90-0227 Amélioration de l'enseignement des sciences de l'information à l'Université de Papouasie-Nouvelle-Guinée*
Université de Papouasie-Nouvelle-Guinée, Port Moresby. Permettre à la bibliothèque et au Département des études en information de la Faculté d'éducation de fournir des programmes d'enseignement professionnel de qualité en bibliothéconomie et sciences de l'information. 175 750 \$ — 36 mois.
- 90-0228 Amélioration de l'enseignement des sciences de l'information dans les universités thaïlandaises
Université Chiang Mai. Permettre aux départements de bibliothéconomie et/ou des sciences de l'information des trois principales universités provinciales — Chiang Mai, Khon Kaen et Prince of Songkla — d'améliorer l'enseignement des sciences de l'information en donnant une formation spéciale aux professeurs de la faculté. 140 860 \$ — 36 mois. DB-SI.
- 90-0232 Application aux murs d'appui (Brésil) — Phase II*
Instituto de Pesquisas Tecnológicas do Estado de São Paulo, São Paulo. Transférer la technologie résultant du projet *Murs d'appui composés de fibres et de sous-produits agro-industriels* aux fabricants et entrepreneurs brésiliens en éléments prefabriqués. 95 396 \$ — 12 mois.
- 90-0236 Promotion de la production ovine (Indonésie)*
Institut Pertanian Bogor (IPB) en collaboration avec le Majalengka Livestock Service, le District of Majalengka Development Planning Board, la Cimanuk River Valley Authority et le Research Institute for Animal Production. Accroître la capacité de production des producteurs ovins de quatre villages du district de Majalengka en leur
- partageant les résultats du projet IPB/CREDI sur l'élevage des petits ruminants. 110 526 \$ — 24 mois.
- 90-0244 Les ONG et la recherche en agriculture (Colombie)
Centro Ladinamericano de Tecnología Rural, Cali. Coordonner les efforts des organisations non gouvernementales (ONG), qui sont des joueurs importants dans la vulgarisation des nouvelles technologies agricoles auprès des fermiers démunis, en vue d'élargir l'impact des ONG et de sensibiliser le secteur public aux besoins des fermiers. 73 700 \$ — 12 mois.
- 90-0263 Trois types de fourrage (Indonésie) — Phase II
Udayana University, Denpasar. Permettre à son Département of Nutrition and Tropical Forage Sciences d'augmenter les revenus des paysans par une meilleure gestion des terres affectées aux systèmes mixtes d'élevage et de cultures de trois fourrages : graminées et légumineuses indigènes, arbustes et arbres fourragers pour les chèvres et le bétail de Bali. 83 410 \$ — 30 mois.
- 90-0266 La connaissance au service du développement : santé, sexualité et grossesse chez les adolescents (Chili)
Corporación de Salud y Políticas Sociales, Santiago. Fournir connaissances, information et recommandations pour l'élaboration, l'implantation et l'évaluation de politiques et de programmes sur la sexualité et la grossesse dans la population adolescente. 241 500 \$ — 24 mois.
- 90-0279 Système d'évaluation, d'élaboration et de promotion de la technologie (Philippines)
University of the Philippines at Los Baños. Permettre au Centre de gestion de la recherche et des départements, les centres et les départements de recherche à se doter d'instruments, systèmes et compétences internes les rendant aptes à évaluer les projets de recherche, à assurer le suivi et à répertorier l'information et la technologie de pointe. 61 249 \$ — 24 mois.
- COMM-DB.

- 90-0129 **Privatisation de la pêche en mer et de la pêche artisanale (Chili-Pérou)**
Universidad Católica de Chile, Santiago. Permettre à l'Institut de sociologie d'analyser l'importance que la privatisation a prise au Chili et dans les pays avoisinants, surtout le Pérou, ces dernières années et ses effets sur la pêche artisanale.
88 590 \$ — 18 mois. APS-SSOC.
- 90-0130 **Base de données sur le secteur agricole équatorien**
Centro de Planificación y Estudios Sociales, Quito. Etablir une base statistique complète couvrant tous les aspects du secteur agricole du pays pour la période 1950-1990, et ainsi disposer d'indicateurs utiles pour l'étude et la conception de politiques agricoles. 152 120 \$ — 18 mois. SI-SSOC.
- 90-0133 **Réseau de recherche sur les politiques économiques, l'équité et la santé (Afrique)**
Zimbabwe Congress of Trade Unions, en collaboration avec le Département d'économie de la University of Zimbabwe. Créer un mécanisme de rapprochement des chercheurs en économie et en santé avec les militants des organisations populaires pour étudier les politiques visant l'économie, l'équité et la santé. 229 425 \$ — 30 mois. SSAN-SSOC.
- 90-0136 **Formation sur les systèmes de nutrition et d'élevage du poisson (Amérique latine)**
Instituto Brasileiro de Meio Ambiente e dos Recursos Naturais Renováveis, Brésil. Permettre au Centro de Pesquisas e Treinamento em Aquicultura d'offrir des cours de formation théorique et pratique sur les systèmes de nutrition et d'élevage du poisson; d'appuyer des recherches aquicoles et des programmes de vulgarisation en cours; de renforcer les capacités de recherche locales sur la production du poisson d'eau douce; et de contribuer au développement de la production aquicole en renforçant les aptitudes en matière de méthodologies.
- 90-0143 **Méthodologie de la recherche en sciences sociales (Afrique centrale et orientale)***
Université Marien Ngouabi, Congo. Permettre à la Faculté des sciences
- 90-0147 **Centre asiatique d'information sur les petits ruminants (Asie)***
Central Sheep and Wool Research Institute, Inde. Etablir un centre asiatique d'information sur les petits ruminants qui sera une composante d'information et un module de soutien pour les chercheurs et les programmes nationaux qui coopèrent avec le réseau des systèmes de production des petits ruminants en Asie. 77 450 \$ — 24 mois. COMM-SI.
- 90-0156 **Surveillance de l'état nutritionnel (Inde)***
National Institute of Nutrition, Hyderabad. Etablir un modèle utile de surveillance de l'état nutritionnel à des fins de micro- et de macro-planification en Inde à partir d'indicateurs simples et précis. 204 000 \$ — 36 mois. APS-SI-SAN.
- 90-0176 **Transitions, politiques gouvernementales et demandes sociales (Paraguay)***
Centro Paraguayo de Estudios Sociológicos, Asunción. Créer un ensemble cohérent et intégré de politiques sociales visant à fournir des solutions aux plus grands problèmes qui confrontent le pays dans sa transition vers la démocratie. 227 885 \$ — 24 mois. APS-SSOC.
- 90-0191 **Module de transfert de la technologie des oléagineuses (Inde)***
Tamil Nadu Agricultural University, Coimbatore. Vulgariser les technologies modernes des oléagineuses auprès de cultivateurs potentiels d'oléagineuses et les motiver à les adopter pour accroître leur production et leurs profits. 63 740 \$ — 36 mois. COMM-SAN.
- 90-0200 **Systèmes d'alimentation (Sénégal)***
Institut sénégalais de recherches agricoles, Dakar. Permettre au Laboratoire national de l'élevage et de recherches vétérinaires de promouvoir l'intégration agriculture-élevage
- 90-0112 **Réseaux agro-industriels (Amérique latine)**
Institut interaméricain de coopération pour l'agriculture, Costa Rica. Contribuer à l'établissement du programme de développement de l'agro-industrie rurale en Amérique latine et dans les Antilles en appuyant trois réseaux nationaux d'agro-industrie rurale au Chili, en Equateur et en République dominicaine. 238 563 \$ — 24 mois. SAAN-SI.
- 90-0118 **Légumineuses et nutrition (Philippines)**
Philippine Council for Agriculture and Resources Research and Development, Los Baños. Etablir un programme communautaire de lutte contre la malnutrition protéinique qui intègre la production agricole, la transformation des récoltes et des produits alimentaires, la commercialisation des surplus de production, la vulgarisation et le développement communautaire. 111 100 \$ — 18 mois. APS-SAN.
- 90-0123 **Agriculture urbaine (Tanzanie)**
Université de Dar es-Salaam. Analyser à fond les tendances actuelles de l'agriculture urbaine à Dar es-Salaam, en se concentrant principalement sur les changements dans l'utilisation des sols dans les espaces libres des quartiers construits, les problèmes liés aux modes d'occupation des sols et d'éventuelles interventions qui permettraient d'améliorer l'agriculture urbaine. 18 344 \$ — 12 mois. SAAN-SSOC.

90-0024 Enquête pilote en agriculture dans la province de Vientiane (République démocratique populaire lao) Ministère de l'économie, de la planification et des finances, Vientiane. Permettre au Centre gouvernemental de la statistique de produire l'information nécessaire au développement du secteur agricole, et en même temps renforcer les capacités du Centre en matière de l'organisation et de l'exécution de sondages et de la diffusion de leurs résultats. 36 585 \$ — 15 mois. SAAN-SSOC.

90-0041 Appui institutionnel, CEDRES (Afrique)* Université de Ouagadougou, Burkina Faso. Permettre au Centre d'études, de documentation, de recherches économiques et sociales (CEDRES) d'augmenter sa productivité de recherche, d'améliorer la diffusion des résultats, et de renforcer ses ressources humaines faisant partie de l'institution. 470 240 \$ — 36 mois. COMM-DB-SI-SSOC.

90-0042 Secteur forêts et bois (Ghana) Université de Cape Coast. Permettre au Centre for Development Studies d'analyser le rôle que le secteur des forêts et du bois peut jouer dans le développement de ce pays, compte tenu de questions comme la conservation des ressources, la maximisation de la valeur ajoutée et la répartition des bénéfices découlant de l'expansion de l'industrie. 56 728 \$ — 24 mois. COMM-DB-SI-SSOC.

90-0054 Réseau de recherche sur les marchés au service du développement (Global) Division des sciences de l'agriculture, de l'alimentation et de la nutrition, CRDI. Définit un cadre conceptuel intégrant la recherche sur les marchés au service du développement au processus développemental; l'application de la recherche sur les marchés au développement dans divers milieux culturels; déterminer un programme de recherche et les besoins en matière de formation pour appuyer l'analyse et diffuser les conclusions des recherches auprès de différents genres d'organismes de

90-0060 Cours sur les techniques d'incubation du chanéd (Philippines) Southeast Asian Fisheries Development Centre, Manille. Diffuser, par le biais de la formation, les techniques d'élevage du chanéd mises au point par son département d'aquaculture avec l'appui du Centre. 12 000 \$ — 1 mois. DB-SAAN.

90-0061 Programme de formation à l'évaluation rapide en milieu rural (Afrique occidentale et centrale) Services de secours catholiques, Sénégal. Former un groupe de chercheurs et d'employés d'ONG à l'utilisation de la méthode d'évaluation rapide en milieu rural. 115 000 \$ — 24 mois. DB-SAAN-SSAN-SSOC.

90-0069 Formation en gestion et marketing de l'information et des services de l'information (Afrique orientale et australe) Eastern and Southern African Management Institute (ESAMI), Tanzanie. Accroître l'utilisation de l'information par des programmes de marketing plus dynamiques; améliorer la durabilité des services d'information par une gestion plus efficace et plus efficiente; renforcer les compétences des ressources humaines de la région en services d'information et de documentation et accroître la capacité de l'ESAMI de fournir des programmes complets de gestion. 425 710 \$ — 36 mois. DB-SI.

90-0077 Réseau amazonien RINAP (Pérou/Régional) Centro de Estudios y de Desarrollo Agrario del Perú (CE&DAP). Financer le réseau de chercheurs de l'Amazonie péruvienne comme mécanisme pour intégrer et renforcer la recherche appliquée qui porte sur le développement durable. 430 260 \$ — 36 mois. SAAN-SI-SSOC-Fonds du bureau régional.

90-0079 Banane plantain (Ghana) Council for Scientific and Industrial Research, Kumasi, en collaboration avec l'Université du Ghana. Améliorer la productivité de la banane plantain et accroître le revenu individuel du petit paysan.

90-0095 Renforcement des capacités de recherche essentielle en santé (Mozambique) Ministério de Saúde, Maputo. Permettre à l'Instituto Nacional de Saúde de mettre sur pied un processus de renforcement des compétences nationales essentielles en recherche dans le domaine des soins primaires. 875 000 \$ — 26 mois. SAAN-SSAN.

90-0097 Drépanocytose et médecine traditionnelle — Publications ASAFED (Afrique) Association africaine d'éducation pour le développement, Togo. Communiquer l'information scientifique (sanitaire et culturelle) Africains aux populations africaines et contribuer ainsi à associer parmi elles une conscience plus aiguë des problèmes médicaux africains et des moyens efficaces pour les résoudre. 80 000 \$ — 6 mois. COMM-SI.

90-0103 Socio-économie et foresterie (Afrique) International Council for Research in Agroforestry (ICRAF), Kenya. Rapprocher la recherche en agroforesterie et le développement technologique des petits exploitants agricoles africains en incorporant des valeurs socio-économiques à la recherche. 457 580 \$ — 36 mois. SAAN-SSOC.

90-0108 Évaluation du DRI (Amérique centrale) Institut interaméricain de coopération pour l'agriculture, Costa Rica. Établir un cadre conceptuel, méthodologique et opérationnel pour la mise en oeuvre efficace des composantes «technologique» et «crédit» des projets de développement rural intégré, de façon à accroître manifestement le bien-être des populations cibles tout en protégeant l'environnement par le biais de méthodes durables de production agricole. 156 700 \$ — 24 mois. SAAN-SSOC.

90-0110 Participation des femmes à la communication pour le développement (Tanzanie) Université de Dar es-Salaam. Permettre à sa faculté des arts et des sciences sociales d'étudier le potentiel de deux médias, le théâtre

enseignants. Cet atelier regroupera une vingtaine de participants venant d'une dizaine d'universités d'Afrique centrale. 21 845 \$ — 6 mois.

90-0201 Majid Rahmema, boursier Pearson

Financer le séjour de 14 mois de Majid Rahmema au Siège social et dans plusieurs bureaux régionaux où il entreprendra des travaux de recherche sur la pauvreté et l'allègement de la pauvreté. 116 100 \$ — 24 mois.

90-0213 Bourse Pearson en

gestion de la science (Global) Division des bourses, CRDI. Initier les participants au Programme des bourses Pearson — des cadres supérieurs dans le secteur public des pays en développement — à la gestion des sciences au sein du secteur public au Canada. 195 000 \$ — 18 mois.

90-0309 Femmes, science et

développement en République de Guinée* Direction nationale des recherches scientifiques et techniques, Conakry. Promouvoir la recherche sur les femmes et créer de meilleures conditions pour favoriser l'émergence des chercheuses guinéennes grâce à une formation efficace et à une meilleure diffusion des résultats de leurs recherches. 32 660 \$ — 6 mois.

90-0310 Formulation et rédaction de propositions de recherche

(Afrique) Regional Institute for Population Studies, Ghana. Initier 19 chercheurs d'Afrique subsaharienne anglophone à l'élaboration de projets de recherche bien articulés dans différents domaines des sciences sociales. 40 526 \$ — 6 mois.

90-0318 Marketing des institutions universitaires

(Cameroun) Association des universités africaines, Ghana. Ouvrir des chantiers de recherche sur les moyens de survie des universités africaines afin de les amener à concevoir et à adapter une stratégie de marketing concentrée uniquement sur l'Université de Yaoundé. 32 478 \$ — 6 mois.

90-0325 Développement de compétences en édition savante dans les universités latino-américaines

Centro Regional para el Fomento del Libro en América Latina y El Caribe, Colombie. Analyser l'évolution actuelle de l'édition universitaire en Amérique latine et définir les besoins en formation; de plus, concevoir et mettre sur pied un instrument de formation à l'intention d'un nombre choisi d'auteurs et d'éditeurs. 50 350 \$ — 12 mois.

90-0326 Programme conjoint de formation pour les secteurs universitaire, public et productif en Colombie

Pontificia Universidad Javeriana, Bogotá. Élaborer un programme dans le but de préparer un certain nombre de cadres de la fonction publique, de chercheurs et de dirigeants d'entreprise à réagir positivement au processus d'internationalisation entrepris en vertu de la politique économique et sociale qui a été adoptée récemment. 30 000 \$ — 6 mois.

90-0346 Bourses — Académie de droit international de La Haye (Global)

Académie de droit international de La Haye, Pays-Bas. Permettre jusqu'à 15 étudiants en droit provenant de pays en développement d'assister aux cours d'été en 1991 ou de compléter leurs travaux de thèse de doctorat à l'Académie. Accorder en outre un soutien aux programmes de l'Académie établis à l'intention des praticiens et des chercheurs du domaine juridique dans le Tiers-Monde. 30 000 \$ — 12 mois.

90-1010 Programmes de bourses aux jeunes chercheurs canadiens

(Global) Division des bourses, CRDI. Favoriser le renforcement, au Canada, d'une capacité de recherche axée sur les priorités du Tiers-Monde en offrant un appui financier à des Canadiens à diverses étapes de leur carrière universitaire et professionnelle qui veulent faire des recherches ou suivre de la formation dans un pays du Tiers-Monde. 460 000 \$ — 24 mois.

Projets

multidimensionnelles⁶

90-0004 Nutrition dans les

quartiers pauvres des villes (Inde) Shreemati Nathibai Damodar Thackersey Women's University, Bombay. Permettre au Department of Postgraduate Studies and Research in Home Science d'étudier la nutrition et le comportement en matière de

santé des familles des quartiers pauvres des villes en développant des interventions visant à améliorer leur accès à l'alimentation, aux revenus et aux services gouvernementaux et non gouvernementaux de santé. 317 550 \$ — 36 mois.

APS-DB-SAN-SSAN-SSOC.

90-0018 Lutte intégrée contre les ennemis des cultures, vulgarisation et femmes (Philippines) — Phase II Université des Philippines à Los Baños. Améliorer la santé, la productivité et le revenu des ménages ruraux dans les régions rizicoles des Philippines, en mettant l'accent sur les femmes, les jeunes et les travailleurs sans terre. 247 110 \$ — 36 mois.

APS = Activités des programmes

spéciaux; BPE = Bureau de la planification et de l'évaluation; COMM = Division des communications; DB = Division des bourses; SAAN = Division des sciences de l'agriculture, de l'alimentation et de la nutrition; SI = Division des sciences de l'information; SSAN = Division des sciences de la santé; SSOC = Division des sciences sociales; STG = Division des sciences de la terre et du génie.

90-0291 Ensemble didactique vidéo (Malaisie)
 Université Pertanian Malaysia, Serdang. Permettre au Centre de formation permanente et de l'enseignement post-universitaire d'offrir des programmes de formation agricole plus poussés grâce à l'introduction d'ensembles didactiques vidéo. 15 000 \$ — 12 mois.

90-0351 Communications «Jatras» pour l'avancement des groupes de femmes (Inde)*
 Decan Development Society, Hyderabad. Rassembler des groupes de femmes dans quatre «Jatras», ou foires villageoises selon quatre thèmes seront organisés selon quatre thèmes différents portant sur le développement dans le but de favoriser une prise de conscience et l'apprentissage. 24 015 \$ — 12 mois.

90-1035 Stratégies de communication en recherche scientifique et technique appliquée (Thaïlande-Canada) — Phase II*
 Thai University Research Association, Bangkok, et l'Université McGill, Québec. Étudier des stratégies de communication dans des domaines techniques et de sciences appliquées visant deux biotechnologies thaïlandaises reconnues pour leur potentiel innovateur, soit les graines de semences végétales et les plantes ornementales. 101 338 \$ — 12 mois.

90-1045 Commercialisation de la ratière (Inde)
 Bombay Textile Research Association et le Conseil de recherche du Manitoba, Canada. Commercialiser la technologie issue du projet *La ratière (Patistan)* afin de fournir aux propriétaires de petits ateliers de tissage les possibilités d'améliorer leurs produits et de les vendre à des prix plus élevés. 68 507 \$ — 16 mois.

Division des bourses⁵

90-0015 Académie de droit international de La Haye (Global)
 Académie de droit international de La Haye, Pays-Bas. Permettre jusqu'à 15 étudiants en droit provenant de pays moins sept spécialistes d'Argentine et Perinatales, Argentine. Former au Centro Rosarno de Estudios (Amérique latine) services de soins communautaires et de développement d'Asie. 168 372 \$ — 24 mois.

90-0086 Recherche, formation et services de soins communautaires (Amérique latine)
 Centro Rosarno de Estudios (Amérique latine) services de soins communautaires et de développement d'Asie. 168 372 \$ — 24 mois.

90-0074 Programme de formation en agroforesterie (Asie)
 Chines Academy of Forestry, Chine. Diffuser les résultats des recherches en agroforesterie menées en Chine à des scientifiques d'autres pays en développement d'Asie. 168 372 \$ — 24 mois.

90-0125 Atelier de formation sur le mécanisme de prise de décision des petits paysans (Amérique latine)
 Grupo de Investigaciones Agrarias, Chili. Renforcer les capacités des membres du réseau de recherche sur les systèmes agricoles lorsqu'il s'agit de produire, de valider et de transférer des technologies appropriées pour les petits agriculteurs, en savoir-faire en matière de méthodologies. 20 780 \$ — 6 mois.

90-0151 Capacité pédagogique universitaire (Afrique centrale)
 Bureau africain des sciences de l'éducation, Zaïre. Organiser un atelier devant permettre de créer les capacités nécessaires à l'amélioration des compétences pédagogiques des programmes et des services de santé communautaires dans le domaine des soins périnataux et obstétricaux en leur faisant faire des études visant à résoudre les problèmes locaux, en les faisant participer à des séminaires et suivre des cours pendant un an. 75 000 \$ — 12 mois.

90-0104 Séminaire sur la création d'institutions de recherche en Amérique latine
 Instituto de Estudios Liberales, Colombie. Établir un programme fondamental de recherche sur les facteurs et les processus se prêtant le mieux à la mise sur pied et au renforcement d'institutions de recherche scientifique en Amérique latine. 74 180 \$ — 6 mois.

90-0114 Appui institutionnel en matière de formation (Afrique subsaharienne)
 Centre panafricain de prospection sociale, Bénin. Promouvoir la recherche sur l'appui institutionnel en matière de formation pour un meilleur développement des ressources humaines dans le contexte de la recherche-développement en Afrique centrale et occidentale. 44 945 \$ — 6 mois.

90-0124 Programme de stages — Phase IV (Global)
 Division des bourses, CRDI. Pour suivre son programme de stages d'acquiescement de la formation à des stagiaires d'institutions ou de projets auxquels le CRDI s'intéresse. 150 000 \$ — 24 mois.

90-0125 Atelier de formation sur le mécanisme de prise de décision des petits paysans (Amérique latine)
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90-0037 Cours sur la manipulation et la gestion des données expérimentales agroforestières — Phase II
 Conseil international pour la recherche en agroforesterie, Kenya. Offrir des cours de formation pour renforcer les aptitudes et capacités des techniciens qui font des expériences agroforestières sur le terrain. 195 090 \$ — 36 mois.

90-0059 Cours de formation régional en apiculture tropicale (Asie)
 Universiti Pertanian Malaysia (UPM), Serdang. Diffuser les résultats d'un projet UPM-CRDI sur l'apiculture tropicale par le biais d'un cours à l'intention de techniciens et vulgarisateurs de certains pays asiatiques. 18 000 \$ — 1 mois.

90-0073 Programme de formation sur les oléagineux (Afrique-Asie)
 G. B. Pant University of Agriculture and Technology, Inde, et l'Institut de Rénir des chercheurs africains et asiatiques spécialisés en oléagineux à des fins d'échange d'information et de perfectionnement en matière de production de deux oléagineux, le brassica et le sésame, et de protection contre les maladies et les ennemis des cultures. 95 000 \$ — 6 mois.

90-0074 Programme de formation en agroforesterie (Asie)
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Bureau de direction³

90-1007 Appui institutionnel : Division internationale de l'AUCC (Canada)

Association des universités et collèges du Canada, Ottawa, mars 1991, ses fonctions dans le but d'accroître le rôle et la participation des universités canadiennes en matière de coopération et de développement international. 92 950 \$ — 12 mois. STG.

90-1047 Appui institutionnel : Division internationale de l'AUCC (Canada)

Division internationale de l'Association des Universités et Collèges du Canada (AUCC), Ottawa. Poursuivre sa mission, du 1^{er} avril 1991 au 31 mars 1992, visant à encourager la participation des universités canadiennes en matière de coopération et de développement international. 117 524 \$ — 12 mois. STG.

Communications⁴

90-0040 Sondage auprès du lectorat du magazine

«Développement Horizons» (Afrique orientale) Development Horizons Trust, Kenya. Planifier l'expansion future ou la transformation du magazine, à la lumière des perceptions qu'en ont les lecteurs et son impact. 18 840 \$ — 12 mois.

90-0192 Recherche et formation en communication interactive (Népal)*

Agricultural Development Bank, Katmandou. Renforcer les activités de communication et de formation de la banque en concevant, testant et implantant des stratégies de formation à son travail, formation qui, aujourd'hui, dépend entièrement de la communication individuelle. 51 950 \$ — 32 mois.

3. La division qui gère le projet, STG = Sciences de la terre et du génie.
4. Les projets subventionnés conjointement avec une autre division paraissent sous le titre «Projets multidivisionnaires».

90-0203 Encyclopédie audiovisuelle (Sénégal)*

Office de radiodiffusion et télé-diffusion du Sénégal, Dakar. Permettre à l'Institut fondamental d'Afrique Noire d'entreprendre un projet de diffusion des résultats de la recherche au Sénégal financée ou non par le CRDI; instaurer un débat national sur cette recherche; et mener des études d'impact de cette recherche sur un public cible. 128 000 \$ — 36 mois.

90-0208 Diffusion de certaines innovations dans les industries nigériennes*

Nigerian Institute of Social and Economic Research, Ibadan. Analyser les facteurs influant favorablement ou non sur l'adoption d'innovations industrielles par les firmes nigériennes. 58 000 \$ — 24 mois.

90-0233 Promotion de la production nationale d'émissions de télévision (Uruguay)

Centro Lahnamericano de Economía de televisión (Uruguay) Humana, Montevideo. Elaborer une série de solutions administratives conçues pour stimuler et promouvoir les émissions réalisées sur place pour le compte de la télévision uruguayenne. 63 418 \$ — 18 mois.

90-0241 Transfert technologique : le cas du maïs dans les hautes terres du Sud (Tanzanie)*

Sokoine University of Agriculture, Morogoro. Permettre au Département of Agricultural Education and Extension d'en arriver à une première définition des mécanismes de communication faisant partie de la dynamique du transfert techno-logique et y étant essentiels en se référant au cas spécifique d'une innovation reliée à la production du maïs. 57 545 \$ — 24 mois.

90-0250 Impact de la publicité télévisée sur les valeurs, attitudes et aspirations des enfants (Inde)*

Institute for Scientific Research and Communication, New Delhi. Evaluer l'effet de la publicité télévisée sur l'enfant indien en vue d'encourager une discussion du sujet et de faire pression pour que la publicité devienne plus responsable envers la société. 22 570 \$ — 12 mois.

90-0251 Enseignement de l'hygiène dans le Maharashtra rural par les enfants intervenant auprès des familles (Inde)*

Seth G.S. Medical College et le K.E.M. Hospital, Bombay. Permettre au Département de médecine préventive et sociale de former les écoliers à jouer le rôle d'agent de changement auprès de leur famille et d'autres familles en ce qui concerne l'hygiène. 7 460 \$ — 16 mois.

90-0269 Presse rurale (Mali)*

Ministère de l'Information, Bamako. Permettre à l'Agence malienne de presse et de publicité d'étudier l'impact de la presse rurale malienne et de proposer les voies et moyens grande entre les besoins du lectorat rural et le contenu des journaux nationaux mais aussi comme un canal privilégié de dynamisation des structures de coopération villageoise. 38 561 \$ — 12 mois.

90-0270 Presse rurale (Zaire)*

Centre d'études des problèmes de la communication, Kinshasa. Apporter un appui au développement de la presse rurale dans la région du Bas-Zaïre en vue de contribuer au développement rural intégré de cette région. 39 600 \$ — 12 mois.

90-0271 Circulation de l'information scientifique (Bénin)*

Ministère de l'Information et des Communications, Cotonou. Permettre à l'Office de radiodiffusion et télévision de faire circuler l'information scientifique et technologique (IST) parmi les utilisateurs potentiels des résultats de recherche en agriculture et santé en particulier, ainsi que de mesurer l'impact de la radio et de la télévision dans leurs tentatives respectives de dissémination de l'IST. 48 681 \$ — 24 mois.

90-0276 DEPTNews — Service de reportages scientifiques du CRDI (Asie)*

Press Foundation of Asia, Philippines. Permettre à ses rédacteurs et journalistes de visiter des projets financés par le CRDI et diffuser les résultats de ces recherches dans la presse écrite et parlée. 17 167 \$ — 18 mois.

Projets ayant fait l'objet d'affectation de fonds au cours de l'année budgétaire 1990-1991

Les listes suivantes donnent tous les projets du CRDI approuvés d'avril 1990 à mars 1991.

Chaque projet est inscrit sous la division qui le finance, sauf s'il est cofinancé par plusieurs divisions auquel cas il figure sous la rubrique «Projets multivisionnaires».

Chaque projet est décrit par une courte note qui précise l'établissement subventionné, la nature de la recherche et le montant de la subvention du CRDI. Ce montant ne comprend ni l'aide financière provenant d'autres organisations donatrices ni les fonds, les salaires ou les locaux fournis par le bénéficiaire de la subvention. La durée du projet est indiquée en mois.

À la fin du rapport se trouvent des index des projets par pays et sujet. L'index des sujets est généralement inspiré du thésaurus de la bibliothèque du CRDI où sont employés les termes internationaux normalisés pour l'analyse du contenu des documents sur le développement et la recherche documentaire.

Vous pouvez obtenir des informations complémentaires sur des projets particuliers en interrogeant la base de données IDRIS ou en écrivant à la Division des communications, CRDI, BP 8500, Ottawa, Canada K1G 3H9.

Activités des programmes spéciaux

90-0023 Sevrage (Inde)
World Food Program, New Delhi.
Étudier les causes de la faible participation des mères et des enfants

1. L'astérisque indique que l'accord entre le CRDI et le bénéficiaire n'a peut-être pas été signé.

2. La division qui gère chacun des projets se présente ainsi : SAAN = Sciences de l'agriculture, de l'alimentation et de la nutrition; SSAN = Sciences de la santé; SSOC = Sciences sociales.

âgés de 0 à 3 ans au programme intégré de services à l'appui du développement des enfants et cerner les moyens d'améliorer les pratiques d'alimentation des enfants, compte tenu du contexte socio-économique local. 30 040 \$ — 12 mois. SAAN.

90-0044 Revenu, emploi et

éducation des femmes en milieu rural dans le nord de la Thaïlande

Université Chiang Mai. Étudier la corrélation entre, d'une part, les perspectives qui s'offrent aux femmes des régions rurales sur les plans du revenu et de l'emploi et, d'autre part, les mesures prises pour les informer et assurer leur éducation. 70 030 \$ — 18 mois. SSOC.

90-0055 Les femmes et la

foresterie sociale (Inde)

Society for Participatory Research in Asia, New Delhi. Permettre à l'Institut for Socio-Economic Development d'analyser les programmes de foresterie sociale dans les États d'Orissa et de Madhya Pradesh, l'accent étant placé sur la participation des femmes pauvres. 22 140 \$ — 18 mois. SSOC.

90-0092 Malnutrition des réfugiés

mauritiens
Environnement et développement du Tiers-Monde, Sénégal. Rechercher les causes pré-existantes ou favorisantes de la malnutrition, d'évaluer la fréquence afin qu'une action immédiate soit entreprise pour enrayer le fléau s'il est identifié. 21 998 \$ — 6 mois. SSAN.

90-0135 Restructuration

industrielle et relations hommes-

femmes en Amérique latine

Facultad Latinoamericana de Ciencias Sociales, Argentine. Faciliter l'accès des femmes au pouvoir en leur fournissant une information qui les aidera à renégocier des questions qui font qu'elles sont en situation d'infériorité au sein du ménage, et à acquérir des aptitudes en matière de leadership afin d'encourager l'action collective et la mobilisation politique et ainsi opérer des changements dans leur

rôle au sein de la société. 52 000 \$ — 15 mois. SSOC.

90-0173 État de la nutrition dans le monde (Global)*

Comité administratif de coordination — sous-comité sur la nutrition, Suisse. Faire un rapport fouillé sur les tendances de la malnutrition et sur certains facteurs la causant dans plusieurs pays de 1991 à 1995, et fournir l'information nécessaire à la planification de la nutrition au niveau national et international. 218 400 \$ — 60 mois. SAAN.

90-0223 Formation en analyse du

rôle des sexes (Global)*

Division des sciences sociales, CRDI. Adapter, valider une méthodologie d'analyse du rôle des sexes qui puisse être incorporée à la composante analytique des projets sur les systèmes d'exploitation agricole et diffuser cette méthodologie au moyen d'ateliers tenus dans toutes les régions où le CRDI est présent. 50 000 \$ — 24 mois. SSOC.

90-0265 Emploi dans le secteur

public (Argentine) — Phase II*

Centro de Estudios y Sociedad, Buenos Aires. Mener une étude approfondie des schémas de discrimination et de ségrégation sexuelles dans l'octroi d'emplois à des hommes et des femmes très éduqués dans deux domaines de services : les services de production (banques, assurances etc.) et les services sociaux (l'éducation et la santé). 35 000 \$ — 15 mois. SSOC.

90-0350 Politique de

l'enseignement informel non sexiste pour les adultes (Afrique du Sud)*

University of the Western Cape, Bellville. Permettre au Centre for Adult and Continuing Education d'élaborer une politique informelle d'éducation pour les adultes sensibilisée à la question du rôle des sexes dans la période post-apartheid en Afrique du Sud. 120 130 \$ — 18 mois. SSOC.

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Annexe du Rapport annuel 1990-1991

Centre de recherches pour le développement international

Le Centre de recherches pour le développement international (CRDI) est une corporation instituée en 1970 par le Parlement du Canada pour encourager et subventionner des recherches techniques et scientifiques réalisées par les pays moins avancés, pour leur propre bénéfice. Les domaines d'étude auxquels le CRDI prête une aide professionnelle et financière concernent : l'agriculture; l'entreposage, le traitement et la distribution des vivres; la nutrition; la foresterie; les pêches, la zootechnie; l'environnement; l'énergie; les maladies tropicales; l'approvisionnement en eau; les services de santé; l'éducation; la démographie; l'économie; les communications; les politiques urbaines; les questions liées aux femmes et le développement; les sciences de la terre et du génie et les systèmes d'information.

Bien que les fonds du CRDI proviennent totalement d'une subvention du gouvernement du Canada, le CRDI est dirigé par un Conseil des gouverneurs international, formé de 21 personnes. Aux termes de sa loi constitutive, le président, le vice-président et neuf gouverneurs doivent être de citoyenneté canadienne; parmi les dix autres gouverneurs, en fait cinq sont des ressortissants de pays en développement.

Les programmes du CRDI aident les pays en développement à se doter des capacités et des institutions scientifiques requises pour résoudre leurs propres problèmes.

Le CRDI met en évidence le rôle du scientifique dans le développement international et encourage les pays du Tiers-Monde à faire appel aux capacités de leur propre communauté scientifique. Les projets de recherche subventionnés par le CRDI sont proposés, élaborés, dirigés et administrés par les chercheurs du Tiers-Monde dans leurs propres pays, en fonction de leurs propres priorités.

Le CRDI aide à la création et au soutien de réseaux de recherche internationaux qui permettent aux pays en développement de profiter mutuellement de leurs travaux, de mettre en commun leur expérience et d'effectuer des recherches visant un même but. Il favorise également la coopération entre les chercheurs des pays en développement et leurs homologues canadiens.

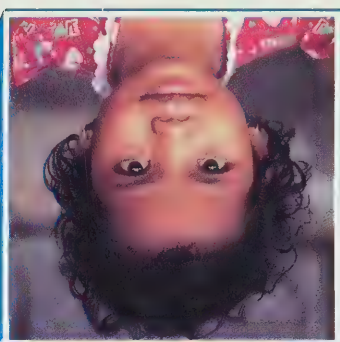


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CRDI, BP 11007, CD Annexe, Dakar, Sénégal
Bureau régional pour le Moyen-Orient et l'Afrique du Nord
CRDI, BP 14 Orman, Giza, Le Caire, Egypte
Bureau régional pour l'Afrique orientale et australe
CRDI, PO Box 62084, Nairobi, Kenya
Bureau régional pour l'Asie du Sud-Est et de l'Est
CRDI, Tanglin PO Box 101, Singapore 9124, République de Singapour
Bureau régional pour l'Asie du Sud
CRDI, 11 Jor Bagh, New Delhi 110003, Inde
Bureau régional pour l'Amérique latine et les Antilles
CRDI, Casilla de Correos 6379, Montevideo, Uruguay
Veuillez adresser vos demandes d'information au sujet du CRDI et de
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Rapport annuel
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Annexe

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